**Anti Histaminic and Anti Spasmodic Activity of**

# VENNOCHI ILAI CHOORANAM

**&**

**Lithotriptic and Diuretic Activity of**

# VEDIUPPU CHENDHURAM

## (DISSERTATION SUBJECT)


**For the partial fulfillment of requirements to the Degree of**

## DOCTOR OF MEDICINE (SIDDHA)

## (GUNAPADAM BRANCH)


## GOVERNMENT SIDDHA MEDICAL COLLEGE

**Tirunelveli – 627002**

**(Affiliated to the TamilnaduDr.M.G.R.MedicalUniversity, Chennai)**


**APRIL – 2013**

# GOVT. SIDDHA MEDICAL COLLEGE PALAYAMKOTTAI.

## DECLARATION BY THE CANDIDATE

I hereby declare that this dissertation entitled Anti-Histaminic and Anti-Spasmodic activity Of **VENNOCHI ILAI CHOORANAM** (Vitex negundo) And Lithotriptic and Diuretic activity Of **VEDIUPPU CHENDHURAM** is a bonafide and genuine research work carried out by me under the guidance of **Dr.A.Kingsly, M.D(S)**, Post Graduate Department of Gunapadam, Govt.Siddha Medical College, Palayamkottai and the dissertation has not formed the basis for the award of any Degree, Diploma, Fellowship or other similar title.

**Date:** **Signature of the Candidate**

**Place:**Palayamkottai (P.Keerthana)

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## CERTIFICATE BY THE GUIDE

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## ENDORSEMENT BY THE HOD, PRINCIPAL/HEAD OF THE INSTITUTION

This is to certify that the dissertation entitled Anti-Histaminic and Anti-Spasmodic activity Of **VENNOCHI ILAI CHOORANAM** (Vitex negundo) And Lithotriptic and Diuretic activity Of **VEDIUPPU CHENDHURAM** is a bonafide work carried out by **Dr.P.Keerthana** under the guidance of **Dr.A.Kingsly, M.D(S)**, Post graduate department of Gunapadam, Govt.Siddha Medical College, Palayamkottai.

**Seal & Signature of the HOD** **Seal & Signature of the Principal**

**Date:** **Date:**

**Place:** Palayamkottai **Place:** Palayamkottai

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## *CONTENTS*

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## *INTRODUCTION*

*The science of medicine is of fundamental importance to human's well being. The Siddha system of medicine flourished in the South India with the basic science of maintaining not only man's physical well being but also mental well-being. It is pointless to determine the exact point of time to which the beginning of this system could be traced. They are eternal,*

***"BEGIN WITH MAN AND END WITH HIM"***

*The exponents of Siddha system of medicines are called Siddhars. They are the super human beings with high culture and intellectual abilities. They are the spiritual scientists who explored and explained the reality of nature and its relationship with man by their Siddhic powers.*

***"NATURE CURE IS THE WAY OF LIFE"***

*In Siddha system, thousands of raw drugs are used. These drugs are categorized into three groups, namely Herbal products, Metal-Mineral products and Animal products. Siddhars predict more easily available simple herbal preparations. Siddhars described that in the treatment of any disease should be treated with the herbs.*

***"VER PAARU THALAI PAARU MINJINAKKAL"***

***"MELLA MELLA PARPACH CHENDHURAM PAARAE"***

*According to this, the leaves of Vennochi (Vitex negundo) a simple and valuable herbal is taken as Aegomooligai prayogam (Single herbal treatment) for Eraippu Erumal as indicated exclusively in the literature Pathaartha Guna Vilakkam (Pg. no 478).*

***"LIFE IS IN THE BREATH AND ONE HE WHO HALF BREATHES HALF LIVES"***

*Breathing, it is the vehicle for delivery of the vital life giving energy to our body cells being is the flywheel of our biological mechanism. It regulates controls and affects many of our body functions.*

*Therefore when we breathe properly and fully. We have an opportunity to manipulate these functions. Breathing is an oxygen supplier and it is the sustainer of our life.*

*All chronic pains, sufferings and diseases are caused due to lack of oxygen in the cell level, and one such suffering in the cell level Eraippu Erumal (Bronchial Asthma).*

*WHO estimates that 235 million people currently suffer from Bronchial Asthma (BA). Asthma (BA) is a public health problem in all countries regardless of the level of development. Asthma is under – diagnosed and under – treated. It creates substantial burden to individuals and families and often restricts individuals activities for a lifetime. Many of the characters of the Bronchial asthma coincide with that of the Eraippu Erumal in respect of the cause of the disease wheezing, tightness of chest, dyspnoea, cough etc., Therefore, I have taken up a simple, cost effective drug Vennochi ilai for my dissertation work on allergic Bronchial asthma and aimed to explore the clinical efficacy and safety of the trial drug in patients with Bronchial Asthma.*

# *AIM AND OBJECTIVES*

***AIM:***

*Eraippu Erumal is one of the common respiratory disorders affecting millions of people all over the world due to environmental hazards. Today many synthetic drugs are available for Asthma, yet they produce many adverse reactions (leading to many complications to follow). Therefore the aim of this trial under the Siddha system is validate the safety and efficacy of the simple and cost effective Vennochi ilai Chooranam on Bronchial Asthma by pre- clinical & clinical trials.*

***OBJECTIVES:***

*The main objectives of the study are*

- *To collect the literature evidence regarding the trial medicine.*
- *To get proper authentication.*
- *To prepare the trial medicine as per the text.*
- *To standardize the trial drug.*
- *To evaluate the anti-histaminic & anti-spasmodic activity of the trial drug pre-clinically.*
- *To evaluate the therapeutical efficacy of the drug through open clinical trial.*

## *REVIEW OF LITERATURE*

## *BOTANICAL ASPECT*

## *Vitexnegundo, Linn*

### *[1]TAXONOMICAL CLASSIFICATION:-*

| | | |
|---|---|---|
| *Kingdom* | - | *Plantae* |
| *Sub Kingdom* | - | *Tracheobionta* |
| *Super division* | - | *Spermatophyta* |
| *Division* | - | *Magnoliophyta* |
| *Class* | - | *Magnoliophyta* |
| *Sub Class* | - | *Asteridae* |
| *Order* | - | *Lamailes* |
| *Family* | - | *Verbenaceae* |
| *Sub Family* | - | *Vitcoideae* |
| *Genus* | - | *Vitex* |
| *Species* | - | *negundo* |

### *[2]VERNACULAR NAMES*

| | | |
|---|---|---|
| *English* | - | *Five leaved Chaste tree*<br>*Monk's pepper* - *Substitute for black pepper in monasteries to maintain chastity* |
| *Sanskrit* | - | *Nirgundi - Literally means which protects body from diseases.* |
| *Hindi* | - | *SambhaluShivari, Nisinda* |
| *Malayalam* | - | *Indranee, Karunacci, Vellanacchi* |
| *Telugu* | - | *Vaavili, Tellavaariti* |
| *Kannada* | - | *Lakkigida, Nekki, Nakkigida, Nakkilu* |

[1] *Pharmacology online - 1356, 1357*

[2] *Wealth of India – 522, Pharmacology online - 1356 - 1357*

*Bengali - Nisinda, Samalu*

*Assam - Aslok, Pasutia, Aggla-Chita*

*Gujarati - Nagod*

*Punjab - Banna, Marwan, Shivari*

*Marathi - Nirgundi*

*Nepali - Simali*

*Chinese - Huang jing*

*Oriya - Beyguna, Begundia*

*Irula name - Loki, neviladi*

***GEOGRAPHICAL SOURCE:***

*Native to tropical Eastern and Southern Africa and Asia.It grows throughout the greater part of India (In southern India, Bengal, Burma) ascending to an altitude of 1500m in the outer Himalayas.*

*It is abundant along the banks of rivers in moist situations, open waste lands and near the deciduous forests.*

*It is widely planted as a hedge plant along the roads and between the fields and is usually not browsed by cattle.*

***HABIT:-***

*A small slender tree.*

*Large aromatic shrub.*

***MORPHOLOGICAL CHARACTERS:-***

*Bark - Thin, grey*

*Leaves - 3-5 foliolate*

*Leaflets - Lanceolate, entire or rarely crenate*

*Terminal Leaflets - 5 to 10 cm X 1.6 to 3.2 cm.*

*Lateral Leaflets - Smaller, all nearly glabrous above, white tomentose beneath.*

*Inflorescence* - *Bluish purple, small in Peduncled cymes, forming large terminal often compound pyramidal panicles.*

*Drupe* - *Globose black when ripe 5-6 mm in diameter invested at the base with enlarged calyx.*

*The rate of growth of shrub is moderate with 7 rings per 2.5 cm of radius giving a mean annual girth increment of 2.3 cm.*

***MEDICINAL USES:-***

*Almost all its parts are employed but the leaves and roots are more important. The dried leaves comprise the drug and have the general characters of fresh leaves and are dark green above and greyish tomentosa below.*

***LEAVES:-***

*The Leaves are aromatic and are considered as tonic and vermifuge.*

- *A decoction of leaves with the addition of long pepper (Piper longum) is given in catarrhal fever with heaviness of the head.*
- *The leaves are also smoked for the relief of head ache and catarrh.*
- *The leaves possess discutient properties and are reported to be applied to rheumatic swellings of joints, in sprains.*
- *A decoction of leaves and the vapours are employed in baths for the treatment of rheumatic affections.*
- *The juice of leaves is said to be used for the treatment of foetid discharges.*
- *An ointment made from the juice is applied as hair tonic.*
- *The drug is also reported to poses tranquilizing effects.*

- *A decoction of leaves was found to prevent the development of swelling of joints.*
- *The leaves are reported to possess insecticidal properties and are laid over stored grain to ward off insects.*
- *The extract of the leaves and twigs showed anti - bacterial activity against Micrococcus pyogens, aureus and Escherichia coli.*
- *An extract of the leaves showed anti - cancer activity against Ehrlich ascites tumor cells.*

***ROOT:-***

- *The roots are hard and tough and break with an irregular fracture.*
- *The root possess tonic, febrifugal, expectorant and diuretic properties.*
- *They are used in dyspepsia and rheumatism and also for boils.*
- *The powdered root is prescribed as an anthelminthic and as a demulcent in dysentery. It is also given for piles.*

***FLOWERS:-***

*The flowers are astringent and are used in fever, diarrhea, liver complaints.*

***FRUITS:-***

- *The fruits are prescribed in headache, catarrh and watery eyes.*
- *When dried, they are considered vermifuge. They are much valued medicinally in China.*
- *An aqueous extract of the fruit was found to have good analgesic action when tested on rats by analgesiometricmethod.*

## [3]PHYTOCHEMICAL PROFILE

***GLUCOSIDES:-***

- *Leutolin - 7 - glucoside ($C_{21}$ $H_{20}$ $O_{11}$).*
- *α - D - glucoside of tetrahydroxymonomethoxy flavones ($C_{22}$ $H_{24}$ $O_{12}$).*

***IRIDOID GLYCOSIDES:-***

- *2 - p - hydroxybenzoylmussaenosidic acid*
- *6' - p - hydroxyl mussaenosidic acid*
- *Negundoside - $C_{23}$ $H_{28}$ $O_{12}$*
- *Nishindaside - $C_{15}$ $H_{24}$ $O_9$*
- *Agnuside - $C_{22}$ $H_{26}$ $O_{11}$*
- *Lagundinin.*
- *Acubin.*

***FLAVONES GLYCOSIDE :-***

*4, 5, 7 trihydroxy - 3' - O - β - D glucuronic - acid - 6" methyl ester - Vitexoside*

***FLAVONES:-***

- *5 - O - desmethylnobiletin*
- *Gardenin - A*
- *Gardenin - B*
- *Corymbosin*

***ISOMERIC FLAVONES:-***

- *5, 3 - dihydroxy - 7, 8, 4 trimethoxyflavanone.*
- *5, 3 - dihydroxy - 6, 7, 4 trimethoxyflavanone.*

[3] *Wealth of India, Pharmacology online - 1359 to 1373.*

***STILBENE DERIVATIVE:-***

*4, 4 dimethoxytranstilbene.*

*Other phytochemicals are α-elemene, δ-elemene, β-elemene, β-eudesmol, camphor, camphene, careen, 1,8 - cineol, α-phellandrene, β-phellandrene, nerolidolBorynl acetate.*

*The constituent of the oil werealdehyde and ketone, phenolic derivatives and cineol.*

*The leaves contain 2 alkaloids Nishindine - $C_{15}$ $H_{21}$ O N and Hydrocotylene - $C_{22}$ $H_{33}$ $O_8$ N. Also contains Glucononitol - $C_9$ $H_{20}$ $O_9$, Tannic acid, Casticin, Orientin, Isoorientin, Vitamin C (150 mg/ 100 g fresh weight basis) and carotene (3500 mg / 100 g fresh weight basis)*

| ***[4]Plant Constituents*** | ***Water extract*** | ***Result*** |
|---|---|---|
| ***Test/Reagents*** | ***Colour*** | |
| *Alkaloids - Dragendorff's reagent* | *Yellow* | *Present* |
| *Tannins- Ferric Chloride Solution* | *Greenish black* | *Present* |
| *Sterols- Concentrated Sulphuric acid* | *Red ring* | *Present* |
| *Glycosides -Libermann's – Burchard reagent* | *Pink Colour* | *Present* |
| *Flavonoids- Ethanolic extract + Magnesium ribbonConcentrated HCl* | *OrangeColour* | *Present* |
| *Resins- concentrated Nitric acid* | *No colour change* | *Absent* |
| *Carbohydrates- Molisch's reagent* | *Pinkish ring* | *Present* |
| *Test for polysaccharides- Anthrone test* | *Green ring* | *Present* |
| *Protein- Pottasium Iodide + Iodine solution* | *Yellow colour* | *Present* |

[4] International Journal of Advanced biological research Vol -2

## *GUNAPADAM ASPECT*

## *நொச்சி - Vitex negundo, Linn*

***[5]வேறு பெயர்***

- *இந்திர சூரியம்*
- *நித்தில்*
- *நிர்குண்டி*
- *நெர்க்குண்டி*
- *சிந்தும சிந்துவாரம்*

*நொச்சியுட பேர் தனையே நுருகக் கேளு*
*நொய்தான சிந்து வாசிமிற் தாகும்*
*புக்கியர் நாசிந்து கச்சிந்து பவுரகமாம்*
*பூர்த்தியாம் நீலபுஷ்பமு மேயாகும்*
*நீக்கிய சூகிச்சகோ நிற்குண்டிபம்*
*நீல கந்தகமுமே சேபாங்காணி*
*வாச்சியமாம் பூத கேசிகமாகும்*
*மநுவனதா நொச்சியுட நாமமாமே.*
*இது இந்தியா முழுவதும் வளருகின்ற ஒரு சிறிய மரம்.*

*[6]சிந்துவகம், திரிபுரமெரித்தான், நீர்க்குன்று.*

*[7]இந்திராணி, வாதமடக்கி, பூததேசி.*

*[8]சிந்து, கடல், நொச்சில், சிந்துவாரி, நொச்சி.*

***வகைகள் :-***

- *கரு நொச்சி*
- *நீர் நொச்சி*
- *வெண் நொச்சி*

*வெண் நொச்சி எங்கும் கிடைக்கக் கூடியது.*
*கருநொச்சி கிடைப்பது அரிது.*

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[5] போகர் நிகண்டு 1200

[6] தட்சநாயனார் வைத்திய அட்டவணை - பக்கம் 28, 29, 34

[7] பசுமூல அகராதி

[8] சாம்பசிவம் பிள்ளை அகராதி பாகம் - III - பக்கம் 2162 & 2163

***பயன்படும் உறுப்புகள் :-***

*இலை, பூ, வேர், பட்டை*

***Organoleptic Characters***

| | | |
|---|---|---|
| *சுவை (Taste)* | - | *கைப்பு, துவர்ப்பு, கார்ப்பு* |
| *தன்மை (Potency)* | - | *வெப்பம்* |
| *பிரிவு (Bio-transformation)* | - | *கார்ப்பு* |

***செய்கை :-***

***பொது :-***

*Alterative (உடற்றேற்றி)*

*Vermifuge (புழுவகற்றி )*

***வேர் :-***

*Febrifuge (வெப்பகற்றி)*

*Expectorant (கோழையகற்றி)*

*Diuretic (சிறுநீர் பெருக்கி)*

***பூ :-***

*Astringent (துவர்ப்பி)*

*Refrigerant (குளிர்ச்சியுண்டாக்கி)*

***[9]வெண் நொச்சி இலையின் பொது குணம் :-***

*நாசந் தருவாத நாசிப்பிணி யழல்சு*
*வாசந் தசனவுரு வன்றோடங் - காசமற*
*லுச்சி யடையை யுறைநோயு மென்படுமோ*
*நொச்சி யடையை நுவல்.*

*வெண் நொச்சி இலையினால் மகாவாதம, பீநிசம், சுரம்,**இரைப்பு**,தந்தவலி, திரிதோடம், இருமல், நீரேற்றம் கப குற்றத்தினால் தலையில் ஏற்படும் நோய்கள் யாவற்றையும் குணப்படுத்தும்.*

***செய்கை :-***

*வேதனாசாந்தினி, மூத்திரவர்த்தகாரி, கிருமிநாசினி, ருதுவர்த்தனகாரி,வியாதபேதகாரி*

[9] பதார்த்த குண விளக்கம் - 478

***வழக்கு முறைகள் :-***

1. *நொச்சி, மிளகு, பூண்டு, இலவங்கம் சேர்த்து சிறிதளவாய் மென்று தின்ன இரைப்பு நோயின் எழுச்சி அடங்கும்.*
2. *இலையைச் சுக்குடன் சேர்த்தரைத்து கன்னப்பொறிகளில் பற்றிடத் தலைவலி தீரும்.*
3. *நொச்சி இலைசாறும், பசுநீரும் 24 கிராம் அளவாக சேர்த்து தினமும் காலையில் கொடுக்க இடப்பாட்டீரல் வீக்கம் குறையும்.*
4. *வெந்நீரில் இலையைப் போட்டு வேக வைத்து நீராவி பிடிக்க வியர்வை உண்டாகி சுரம் தணியும். வளிக்குற்றத்தால் உண்டான உடல்வலி முதலியனவும் போம்.*
5. *இதன் இலையை கசக்கி தலையில் வைத்து கட்ட தலைப்பாரம் போம்.*
6. *இந்த இலைச் சாற்றுடன் சிறிது மிளகு கூட்டி மெழுகு போல் அரைத்து சிறு சுண்டைக்காய்ப் பிரமாணம் தினம் 3 வேளை கொடுப்பதுண்டு. இதனால் சுரம் தேகவலி, அஜீரணம், கைகால் பிடிப்பு போம்.*

# இரைப்பிருமல் தீர்க்கும்

**[10]நொச்சி சேரும் மருந்துகள்:**

- **சுவாசகாசக் குளிகை**

  இருதாங் கெந்தகம்".

  ஒருமை நொச்சி ".

  ". சுவாச மவத்தையெல்லாம்".

அளவு - பயிறளவு

அனுபானம் - தேன், நெய், சர்க்கரை

தீரும் நோய் - ஈளை, இருமல், சுவாசம்

- **[11]சுவாசகாச ஹரம்**

  கண்டு பரங்கி யிருசங்கு ".

  ". மோதக னொச்சில் ".

தீரும் நோய் - சுவாசகாசம், இரைப்பு, இருமல், இளைப்பு

- **[12]ஏமசண்டமாருதக் குடோரி**

  நொச்சியோடு சித்தாமுட்டி பேராமுட்டி ".

  நோக்கரிய குடியோட்டி

அளவு - உளுந்தளவு 1 மாத்திரை தக்க அனுபானத்துடன்

தீரும் நோய் - ஈளை, சயநோய், காசம், மந்தாரகாசம்

- **[13]ஈளை சுவாசத்திற்கு**

  ". சேத்துமங்க ளிளைப்பு மூச்சே

  யாமடா தோடை நொச்சில் ".

தீரும் நோய் - சயம், இருமல் தீரும்

அளவு - ஒருவராகனெடை

அனுபானம் - தேன்

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[10] தேரையர் வைத்தியம் - 1000 பக்கம் 176

[11] நோய்களுக்கு சித்த பரிகாரம் பக்கம் 167

[12] பிரம்மமுனி வைத்திய சூத்திரம் பாகம் 1 - பக்கம் 136

[13] பிரம்மமுனி வைத்திய சூத்திரம் பாகம் II - பக்கம் 51

- **[14]ஈளை இருமல் தீர நெய்**

  பாட்டுடனே பச்சை நொச்சி சாறு வாங்கி

  பரிவான சீலையிலே துவைத்து வாட்டி

தீரும் நோய் - சுவாசம், இருமல்

- **[15]நொச்சித் தைலம்**

  சீதசுரச மார்கவஞ் சங்கு சாறடை .....

அளவு - காசளவு

தீரும் நோய் - காசநோய், சயம்

- **[16]ஈளை இருமலுக்கு புகை**

அளவு - முக்கழஞ்சு

தீரும் நோய் - ஈளை

- **[17]காச சுவாச கிருதம்**

தீரும் நோய் - சுவாசகாசமும், இருமல், இரத்த பித்தம்

**நொச்சி சேரும் பிற மருந்துகள்**

- **[18]சயரோகத்துக்கும், காசஷாணாபசாதி லேகியம்**

அளவு - கொட்டைப் பாக்களவு

தீரும் நோய் - 11 வகை சயரோகம்

- **[19]மகாக்கோடா சூரிக் குளிகை**

  ஓங்கு வெண் ணொச்சிலைச் சார்"

  ஓகேகோ தும்பை"

தீரும் நோய் - இருமல் காது எழுச்சி

அளவு - சிறுபயிறளவு

அனுபானம் - தும்பை ரசம்

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[14] பிரம்மமுனி வைத்திய சூத்திரம் பாகம் II - பக்கம் 63

[15] சித்த வைத்தியத் திரட்டு பக்கம் 279

[16] அனுபவ வைத்திய முறைகள் - பக்கம் 63

[17] அனுபவ வைத்திய முறைகள் - பக்கம் 33

[18] அனுபவ வைத்தியத்திரட்டு - பக்கம் 74

[19] பிரம்மமுனி வைத்திய சூத்திரம் பாகம் II - பக்கம் 132

- **[20]முக்கூட்டு தைலம் - முழுகுவதற்கு**

நான்கு நாட்களுக்கு ஒரு முறை

தீரும் நோய் - 4448 வியாதிகளும் தீரும்

அளவு - குன்றி அளவு (1 - 4 மாத்திரை)

அனுபானம் - துளசி சாறு, காடி

- **[21]கருவாழை மாத்திரை**

தீரும் நோய் - இருமல், பித்தவாத சுரம்

- **[22]வீரபத்திரன் மாத்திரை**

தீரும் நோய் - கபம், இருமல்

அளவு - மிளகளவு

அனுபானம் - பழ இஞ்சி சாறு, சுக்கு குடிநீர்

[20] பிரம்மமுனி வைத்திய சூத்திரம் பாகம் I - பக்கம் 23

[21] சித்த மருத்துவச் சுடர் - பக்கம் 329

[22] சித்த மருத்துவச் சுடர் - பக்கம் 358

## [23]அனுபானம் - காய்ந்தாறிய நீர்

"காய்ந்தநீ ருண்ணுங்கால் கண்செவிநோய் சூலைகுன்மந்
தோய்ந்தசுர வேகந் தொடரையும் - பாய்ந்தடரும்
வாதத்தின் கோபமிவை மாறுமென் லாதியருள்
வேதத்தின் வாக்கியமாம் விள்".

"காய்ந்தாற வைத்த நீர் கட்டுழலை விக்கலொடு
வாய்தவழி சாரபித்த மாற்றுங்காண் - சேர்ந்து வரு
மூர்ச்சை விசூம்வாந்தி முன்மயக்க மேகமதி
யூர்ச்சிதமுத் தோசூம் போக்கும்".

**விளக்கம் :**

காய்ந்தாறிய வெந்நீர், உழலை நோய், விக்கல், பேதியாற்கிளைத்த பித்த கோபம், மூர்ச்சை, சில்விசூம், வாந்தி, மயக்கம், சுக்கிலமேகம், திரிதோடம், கண்ணோய், செவிக்குத்தல், சூலை, குன்மம், சுரவேகம், கோழை, வாதாதிக்கம் இவைகளைத் தீர்க்கும்.

[23] பதார்த்த குண சிந்தாமணி, நோயில்லா நெறி, பக்கம் - 162

## *SIDDHA ASPECT OF THE DISEASE*
## *இரைப்பு நோய்*

***[24]வேறு பெயர்கள் : இழுப்பு நோய், சுவாசகாசம்***

***இயல் :***

- *இன்ன வகையென்று குறிப்பிடக் கூடாதபடி ஒரு காரணமுமின்றி மார்பை இறுக்கியது போன்ற வேதனைத் தரும். (Tightness of chest)*
- *மூச்சை வெளியிடவும், உள் இழுக்கவும் முடியாமல் திணறச் செய்தல்*
- *வெளியாகும் மூச்சு மிகுந்த சிரமத்துடன் வெளியாதல் (Shortness of breath)*
- *குழல், யாழ், வீணை போன்ற வாத்தியங்களைப் போல் ஒலி (Wheezing)*
- *இருமல், காணல், கோழை வெளியாதல் இல்லை. (Cough)*

***[25]நோய் வரும் வழி :***

- *ஐயத்தை மிகுதிப்படுத்தும் உணவு வகைகளாலும்*
- *புல், பூண்டு, அரிசி, கேழ்வரகு முதலியவைகளின் சுணையாலும்*
- *தனக்கு ஒவ்வாத நாற்றப் பொருட்களை முகர்வதாலும் இந்நோய் பிறக்கும்.*

  *" கால்பெருக் குணவு பொருள் தண்ணீர் மாறல்*
  *கருதிருமல் மிகல்வாந்தி குளிர்ந்த காற்று*
  *மால்செய்து நாள்தோறும் வறுத்துங் காய்ச்சல்*
  *மந்தன முயிர்நிலையி லடிகள் தாக்கல்*
  *ஏல்சீத பேதிவிட பாண்டு புகைகள்*
  *இலகிய நெல் லாதிமணிச் சுணையுட் செல்லல்*
  *மேல்வழியிற் சிலவினு மிரைப்பாம் நோயு*
  *மேவுமென முனிவரர்கள் விளம்பினாரே"*

*இதனால்*

- *கைப்பு, கார்ப்பு சுவையுள்ள கிழங்கு பொருட்களை உண்பதாலும்,*
- *அதிசீதள நீரை அருந்தலாலும்*
- *அருவருப்பாகிய புகையை சுவாசிப்பதாலும்*

*இந்நோய் வருமென்று கூறப்பட்டுள்ளது.*

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[24] சித்த மருத்துவம் -241

[25] கையெழுத்து பிரதி

***[26]நோயின் முற்குறி குணங்கள் :***

*பன்னாட்கள் துன்பப்பட்டவர்கள் நோய் வருமுன் இதன் குறியை அறிவார்கள். வரக்கூடிய நோயின் வன்மையையும், அளவிடுவார்கள். ஆகாத உணவும், ஆகாத காற்றின் மணமும் பட்டவுடன் மூக்கில் நீர்பாய்தல், தும்மலுண்டாதல், மார்பு நோதல், மார்பை இறுக்கக் கட்டியது போலிருத்தல், வேதனை, இயற்கை மூச்சு தட்டுப்படல், விலாப்பக்கம் வலித்து மூச்சுத் திணறல், வயிறுப்பல், உடல் வியர்த்தல் போன்ற குறிகுணங்கள் உண்டாகும்.*

*[27]" மார்பில் விலாவிரண்டில் மண்ணுமிரு நெரியில்*
*சேர்ந்து வலித்தல் திணறல் - தார்மூச்சு*
*உப்பல் வயிற்றி லுறுவதுவே முற்குறியாச்*
*செப்பிரைப்பு நோயக்கிதனைத் தேர்"*

***[28]பொது குறி குணங்கள் :***

*"கட்டியே கோழை இருமவே வீழ்ந்து*
*கச்செவி சீறுதல் போல்*
*முட்டியே மூச்சு வன்மையாய்ச் செருமி*
*மூக்கழல் எய்தியே யுடலம்*
*வற்றியே மெலிந்துண் ணாவரை நீரும்*
*வரட்சீ ரணமிகு வியர்வை*
*கட்டிபோல் வயிறு முதிடி லிரைப்பா*
*மிருமலென் றோதுவர் காணே".*

*[29]" வன்மையாய்க் கோழைகட்டி இருமி வீழும்*
*மாநாகம் போலவே வாங்குஞ் சுவாசம்*
*திண்மையாய்ச் செருமலுண்டா மடிக்க டிக்குஞ்*
*சீரண மிலாமலே வயிறு முதும்*
*நன்மையாய் நாசியது தணல்போ லாகும்*
*நலிந்துடம்பு வற்றி வருங் குரலுங் கம்மும்*
*உண்மையா யுண்ணாக் கிலுாறுங் கேணி*
*யுழந்துமே சுவாசகா சத்தி னொப்பே".*

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[26] சித்த மருத்தவாங்க சுருக்கம்
[27] யூகி வைத்திய சிந்தாமணி
[28] யூகி வைத்திய சிந்தாமணி
[29] யூகி வைத்திய சிந்தாமணி

*இந்நோயில் மூக்கிலிருந்து வெளியாகும் காற்று அனல் வீசும், தொண்டை கட்டி மூச்சு எலி கூச்சிடுதல் போல் ஒலிக்கும். மார்பில் கோழை கட்டி இருமலெழும். நோய் முதிரின் வெளியாகும் மூச்சு நல்ல பாம்பு சீறுவது போல் ஒலிக்கும். உணவு செரியாது. வயிறுப்பும்.*

***[30]நோய் எண் :***

- *வளி இரைப்பு*
- *ஐய இரைப்பு*
- *ஐயவளி இரைப்பு*
- *முக்குற்ற இரைப்பு*
- *மேல்நோக்கு இரைப்பு*

***[31]முக்குற்ற முதலிய வேறுபாடுகள் :-***

*" வளியும் ஐயமும் சேர்ந்த மிகுதியே காரணம்*
*உற்றிடும் ஐயநாடி*
*ஓங்கியே துடித்து நின்றால்*
*பற்றிடும் மிரும் லீளை*
*பதறியே இரைப்புண்டாக்கி*
*மெத்தவே கோழை வாயு மிகுந்திடும்*

***[32]நாடிநடை :-***

*"கபத்தினையன்றி காசசுவாசம் காணாது"*

*ஐய நாடி மிகுதியாலும், வளி ஐய தொந்தத்தாலும், வாயுவால் தூண்டப்பட்ட பித்தமிகுதியாலும், ஐய பித்த தொந்தத்தாலும் இரைப்பு நோய் உண்டாகும்.*

***[33]எச்சில் :***

- *கோழை அல்லது சளியானது நுரைத்தும் அளவில் மிகுந்தும், பளுவற்றும் இருப்பின் வளிக்குற்றத்தினால் வந்தது எனலாம்.*
- *கறுத்துக் கெட்டிப்பட்டு, புலால் மணத்துடன் கடினமாகவும், வெளுத்தச் சீழ் கலந்தது போலும் மஞ்சள் நிறத்துடனும் காணின் ஐயக்குற்றத்தினால் வந்தது எனலாம்.*

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[30] சித்த மருவாங்கச் சுருக்கம் பக்கம் 117

[31] யூகி வைத்திய சிந்தாமணி

[32] நோய்நாடல் நோய் முதல் நாடல் பாகம் 1 பக்கம் 216

[33] நோய்நாடல் நோய் முதல் நாடல் திரட்டு பாகம் 1 பக்கம் 115

***நீர்க்குறி :***

*"அறவெளிர்ப்பிலும் சளியைப் போல் விழினது*
*மறவன் அதி கொதிப்பால் வருவனமே"*

*நீர் மிகவும் வெளுத்தாலும், அதில் சளியைப் போல விழுந்தாலும், அந்த நீர் ஐயத்தின் மிகுந்த கொதிப்பால் வருகின்ற நீராகும்.*

*"விந்துவைப் போன்ற நீர் விழல் கப நோயையும்*
*பந்தித்த சந்தி பாதத்தையுந் தரும்"*

*எனபதனால் இந்திரியத்தைப் போன்ற நீரானது, வன்மையுள்ள கப நோயையும் (கோழை நோய்களாகிய சயம், சுவாசம், காசம் முதலியவை) உறுதியுள்ள சன்னி நோயையும் தரும்.*

***நெய்க்குறி :***

*"முத்தொத்து நிற்கின் மொழிவதென் கபமே"*

*எண்ணெய்த்துளி விட்டது விட்டவாறே சிறிதும் பரவாமல் முத்துப்போல் நிற்குமானால் அந்நீர் ஐய நோயைக் காட்டுவதாகும்.*

***[34]நிறக்குறி :***

*"நிலமிகு கபமே ஆகின்*
*நிறைதுரை போன்றிருக்கும்*
*இலகுமம் மூத்திரத்தில்*
*எண்ணெய்யை விட்டுப் பார்க்கில்*
*சாற்றின கபத்தி னுக்குச்*
*சல்லடைக் கண்போற் காணும்*
*வேற்றொரு துளியாய் நின்றால்*
*விருதாகுஞ் சாத்தியந்தான்*
*ஆற்றியே மெல்லப் பரவின்*
*அது சுக சாத்தியந் தான்"*

***[35]சேத்தும கோபநீர் நிறம் :***

*"வளமுறை வெள்ளையாகி வற்றி நீர் குறுகி நின்றால்*
*தெளிவுறச் சேத்துமத்தின் செய்கை யென்றுறைக்கும்*
*குளிர் மையினாலே வெள்ளையாகிய குணமாமென்றும்*
*இளகு பச்சிரத்தந்தன்னா லிறுகின தென்றுஞ் சொல்லே".*

[34] நோய்நாடல் நோய் முதல் நாடல் பாகம் 1
[35] நோய்நாடல் நோய் முதல் நாடல் பாகம் 1

*"நீர் வெண்மை நிறம் பொருந்தி அளவிலும் குறைந்திருந்தால் அது சேத்துமத்தாலுண்டான குணமாகும்".*

***சீதமிகுதி நெய்க்குறி :-***

*வல்லநல் லெண்ணெய் துனியா வார நோய் முதல் நாடலத்தில் ...*
*சொல்லருங் குளிர்மை மீறித் தோஷமுற் றெய்து மென்றும்*
*நீரில் விட்ட எண்ணெய்த் துளியானது நெகிழாமல்*
*அப்படியேயிருந்தால், சீதமிகுதியாய் உண்டானதென்று அறியலாம்.*

# [36]*MODERN ASPECT OF THE DISEASE*

***BRONCHIAL ASTHMA:***

***ETYMOLOGY:***

*The word bronchus came from Greek (bronkhos) – "wind pipe" and in Greek,asthma means "short breath, a panting".*

***HISTORY:***

*Asthma was recognized in Ancient Egypt and was treated by drinking an incensemixture known as kyphi. Officially recognized as a specific respiratory problem separate from others was first recognized and named by Hippocrates 450 BC. During the 1930s–50s, asthma was considered as being one of the 'holy seven' psychosomaticillnesses. Its aetiology was considered to be psychological, with treatment often basedon psychoanalysis and other 'talking cures'. As these psychoanalysts interpreted the asthmatic wheeze as the suppressed cry of the child for its mother, they considered that the treatment of depression was especially important for individuals with asthma.*

*Among the first papers in modern medicine published on the subject is one published in1873, which tried to explain the pathophysiology of the disease.*

***DEFINITION:***

- *Asthma is a syndrome characterized by air flow obstruction that varies markedly,Both spontaneously and with treatment.*
- *Asthmatics harbor as special type of inflammation in airway that makes them more responsive than non asthmatics to a wide range of triggers, leading to excessive narrowing with consequent reduced air flow and symptomatic wheezing and dyspnoea. Narrowing of airway*

[36] Harrisons Text book of Medicine Pg 1602

*is usually reversible but in some patients with chronic asthma there may be an element of irreversible airflow obstruction.*

***[37]EPIDEMIOLOGY:***

*Asthma statistics in India (WHO)*

1. *57.5 estimated total deaths*
2. *5.1 estimated deaths per 100000 population*
3. *277 DALYs (disability adjusted life-year) per 100,000*
4. *6.5 age-standardized deaths per 100,000*
5. *268 age-standardised DALYs per 100,000*
6. *constitutes 0.2% of all deaths and 0.5% of National Burden of Diseases*

***TYPES:***

*Extrinsic asthma (Atopic asthma, early onset asthma)*

- *Onset is in childhood.*
- *Identified by skin sensitivity test*
- *Asthmatic inflammatory reaction is characterized by a cellular infiltrate rich in Eosinophils.*

*Intrinsic asthma (Non-atopic asthma, late onset Asthma)*

- *It can begin at any age*
- *Especially in late adulthood*
- *There was no role of allergens in the production of the disease.*

***COMMON ASTHMA TRIGGERS INCLUDE:***

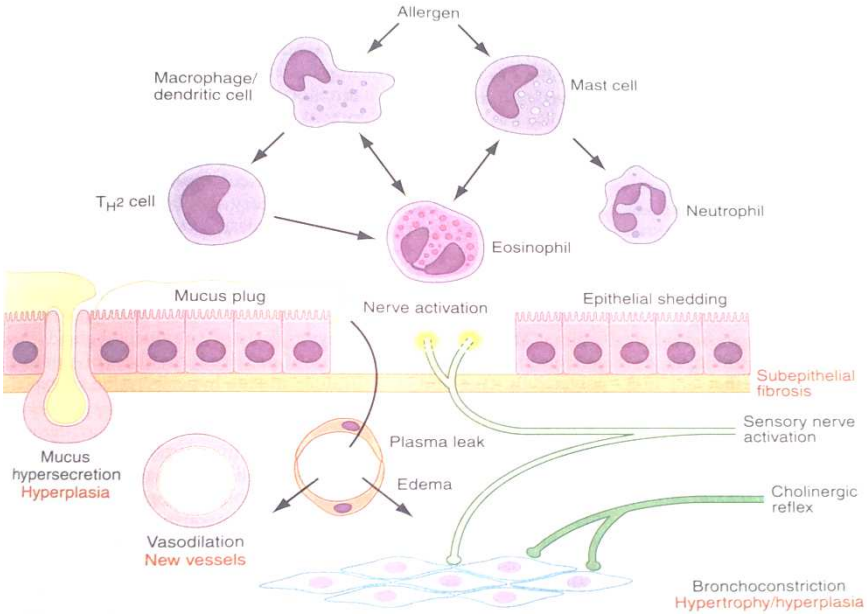
- *Animals (pet hair or dander)*
- *Dust*
- *Changes in weather (most often cold weather)*

[37] ***sancd.org (SOUTH ASIAN NETWORK FOR CHRONIC DISEASE)***

- *Chemicals in the air or in food*
- *Exercise*
- *Mold*
- *Pollen*
- *Respiratory infections, such as the common cold*
- *Strong emotions (stress)*
- *Tobacco smoke*
- *Drugs - Aspirin and other nonsteroidal anti-inflammatory drugs (NSAIDs) provoke asthma in some patients.*

*Many people with asthma have a personal or family history of allergies, such as hay fever (allergic rhinitis) or eczema. Others have no history of allergies.*

***PATHOPHYSIOLOGY:***




- *Chronic airway inflammation as evidenced by cellular infiltration of airway by activated eosinophils,mastcells,macrophages and T-lymphocytes*
- *Released mediators from the above cells cause bronchial smooth muscle contraction*

- *Denudation and desquamation of the epithelium forming mucous plugs that obstruct the airway*
- *Airway remodeling as evidenced*
- *Smooth muscle hypertrophy and hyperplasia*
- *Goblet cell and sub-mucosal gland hypertrophy leading to mucous hypersecretion*
- *Collagen deposition causing thickening of lamina reticularis*
- *Cellular infiltration, oedema and possible airway wall thickening.*

***CLINICAL FEATURES:***

***SYMPTOMS:***

*Most people with asthma have attacks separated by symptom-free periods.*

*Some people have longterm shortness of breath with episodes of increased shortnessof breath. Either wheezing or a cough may be the main symptom. Asthma attacks can last for minutes to days, and can become dangerous if the airflow is severelyrestricted.*

***Symptoms include:***

- *Cough with or without sputum (phlegm) production*
- *Pulling in of the skin between the ribs when breathing (intercostal retractions)*
- *Shortness of breath that gets worse with exercise or activity*
- *Abnormal breathing pattern --breathing out takes more than twice as long as breathing in*
- *Breathing temporarily stops*
- *Chest pain*
- *Tightness in the chest*
- *Wheezing, which:*

- *Comes in episodes with symptom-free periods in between*
- *May be worse at night or in early morning*
- *Gets better when using drugs that open the airways (bronchodilators)*
- *Gets worse when breathing in cold air*
- *Gets worse with exercise*
- *Usually begins suddenly*

***Emergency symptoms:***

- *Bluish colour to the lips and face*
- *Decreased level of alertness, such as severe drowsiness or confusion, during an asthma attack*
- *Extreme difficulty breathing*
- *Rapid pulse*
- *Severe anxiety due to shortness of breath*
- *Sweating*

***Other symptoms that may occur with this disease:***

- *Abnormal breathing pattern --breathing out takes more than twice as long as breathing*
- *Breathing temporarily stops*
- *Chest pain*
- *Tightness in the chest*

***DISEASE PATTERN:***

- *Episodic - acute exacerbations interspersed with symptom-free periods*
- *Chronic - daily airway obstruction which may be mild, moderate or severe may or may not superimposed acute exacerbations*
- *Life-threatening- slow-onset or fast-onset*

***STATUS ASTHMATICUS:***

*It is a medical emergency, patient is hypoxic and cyanosed due to severe bronchospasm.It is characterized by Tachycardia (pulse rate > 120), Tachypnoea (respiratory rate > 30/minute), sweating, pulsus paradoxus (> 10 abnormal,> 20 profound obstruction), altered level of consciousness, and an inspiration-expiration ratio of 1:3 or 1:4.*

***LIFE THREATENING FEATURES:***

- *Patient cannot speak*
- *Central cyanosis*
- *Exhaustion,confusion,altered consciousness*
- *Bradycardia*
- *Silent chest*
- *Unrecordable peak flow*
- *Severe hypoxaemia(< 8 kPa)*

***DIAGNOSIS:***

***CLINICAL DIAGNOSIS:***

- ***Episodic asthma**: Paroxysms of wheeze, dyspnoea and cough, asymptomatic between attacks.*
- ***Acute severe asthma**: Upright position, use accessory respiratory muscles, can't complete sentences in one breath, tachypnea > 25/min, tachycardia > 110/min,PEF< 50%, pulsus paradoxus, chest hyperresonant, prolonged expiration, breathsounds decreased, inspiratory and expiratory rhonchi, cough.*
- ***Life-threatening features**: PEF < 33%, silent chest, cyanosis, bradycardia,hypotension, feeble respiratory effort, exhaustion, confusion, coma, PaO2 < 60, PCO2normal or increased, acidosis (low pH or high [H+]).*

- ***Chronic asthma****: Dyspnea on exertion, wheeze, chest tightness and cough on daily basis, usually at night and early morning; intercurrent acute severe asthma and productive cough, recurrent respiratoryinfection, expiratory rhonchi throughout andaccentuated on forced expiration.*

***PHYSIOLOGICAL DIAGNOSIS:***

- *Demonstration of variable airflow obstruction with reversibility by spirometer andpeak flow meter.*

***IMMUNOLOGICAL DIAGNOSIS:***

- *Skin pricks wheal and flare response.*
- *IgE*
- *Eosinophil cationic protein (ECP).*
- *Peripheral blood and sputum eosinophilia*
- *Chest X Ray - Rule out other causes of wheezing.*

***DIFFERENTIAL DIAGNOSIS:***

- *Chronic bronchitis*
- *Emphysema*
- *Cystic fibrosis*
- *Mechanical airway obstruction*
- *Foreign body aspiration*
- *Endobronchial tumour*
- *Cardiac failure*
- *Pulmonary embolism*
- *Pulmonary eosinophililia*
- *Carcinoid syndrome*
- *Allergic bronchopulmonary aspergillosis*

## *ASANAS*

*Asanas focus on Increasing capacity of the lungs and relaxing the chest muscles which contract and remain tense during and after Bronchial Asthma attacks.*

***ARDHACHAKRASANA:***

*PROCEDURE:*

*Stand erect in straight line keeping the heels together and toes an little apart, expand the chest and drop the shoulders to a relaxed position. Keep the neck straight. Fingers together, facing downwards and palms stretched along the thighs by the sides and Relaxed face.*

*Slowly slide up the palms and support the back at the waist exhale. Bend backwards from the lumbar region, and neck bends back wards stretching the muscles of the neck. Inhale while bending. This is the final position of the asana, breathe normally.*

*Exhale come back to straight position keeping the support at the back at the waist by palms.*

*Release the hands from the support of the waist while exhaling.*

*THERAPEUTICAL USES:*

*Good in treating **Asthma** and low back pain. Relaxes cramps in thighs and calves.*

***USTRASANA:***

*PROCEDURE:*

*Sit erect with legs stretched, heels together, palms pressing on the floor by the side of the buttocks. It is called Dandasana.*

*Fold right leg at the knee and place the heel under the right buttock. Fold left leg at the knee and place the heel under the left buttock. Stand on the knees making the trunk vertical. Inhale bend the body backwards and keep the palms on the soles. Exhale slowly release the palms and return to 3$^{rd}$ position.*

*Slowly sit on the heels, unfold the left leg and keep it straight. Unfold the right leg and keep it to side of the leg.*

*THERAPEUTICAL USES:*

*Good for back aches, **breathing problems**. Arthritis, Lumbago, Sciatica, Flatulence and Gastric troubles.*

***BHUJANGASANA:***

*PROCEDURE:*

*Lie down on the prone with the hands above the head keeping straight alongside the head resting the palms on the ground, touching the chin on the floor and legs together soles facing up. Keep the body from toes to heads in a straight line.*

*Bend both the elbows and place the palms on the floor by the side of the last rib bone.*

*Inhale slowly lift the head and then raise the chest. Feel the weight of the body at the lumbar region maintain the position.*

*Exhale bring the chest and head down touching the floor with the chin. Release the hands and place them above the head region on the floor and come back to normal position.*

*THERAPEUTICAL USES:*

*Goos for back aches due to over strain work, neck pain cervical spondilitis, hunch back, **bronchitis, asthma**, digestive disorders, reduction of the abdominal fat. Improves digestion and bowel action.*

***MATSYASANA:***

*PROCEDURE:*

*Lie down on the supine keeping the legs together and stretch the hands straight above the head region i.e., from toes to head, the entire body in a straight line.*

*Bend the right leg and keep the right foot and the left thigh. Bend the left leg then keep the left foot on the right thigh, thus assuming Padmasana.*

*Place the palms on the floor above the shoulders, on either side of the head, fingers pointing to the shoulders. Then press the palms on the floor, inhale, lift the head and chest on the floor. Keep the centre of the crown of the head on the floor by bending the dorsal and cervical spine backwards. Remove the hands, hook the big toes with the index fingers. Maintaining position is normal breathing.*

*THERAPEUTICAL USES:*

*Very good for diabetes, **asthma** and people threatened with other lung diseases.*

***CHAKRASANA:***

*PROCEDURE:*

*Lie down on the supine position, keeping the legs together and stretch the hands straight above the head region i.e., from toes to head, the entire body in straight line.*

*Bend the knees and place the heels closest to the buttocks ears by bending the elbows.*

*Inhale lift the body up above the ground and balance on the palms and feet. Exhales slowly return to the first position.*

*THERAPEUTICAL USES:*

*Clears the respiratory track.*

## *LATERAL RESEARCH WORK FOR VITEX NEGUNDO*

*A perfect example of medicinal plant credited with innumerable medicinal qualities validated by modern science and used since ancient times is VITEX.*

*Vitex negundo has the medicinal activities like analgesic, anti-inflammatory, anticonvulsant, antioxidant, bronchial relaxant, hepatoprotective, etc.*

*The brief of research works done in this species are as follows*

***[38]ANALGESIC ACTIVITY:***

*The ethanolic leaf extract of this plant possesses analgesic activity, which appears to be due to PG inhibition and reduction of oxidative stress.*

***ANTIINFLAMMATORY ACTIVITY:***

*[39]The experimental studies using various animal models have demonstrated that different parts of plant especially leaves possesses anti-inflammatory and anti-athritic activity.*

*[40]The leaves have anti-inflammatory and analgesic properties mediated via PG synthesis inhibition, membrane stabilizing and antioxidant activities. Vitex negundo which is known to act by prostaglandin inhibition, may be expected to cause gastric damage but on the contary it produced no histomorphological changes in the stomach even in toxic doses. This may be due to a selective COX-2 inhibition that might be responsible for its NSAID's like activity.*

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[38] *Gupta and Tandon (2004)*

[39] *Chaturvedi & Singh, 1965; Ravishankar et al, 1985-86*

[40] *Dharmasiri et al & Tandon and Gupta, 2004*

## [41]*ANTIOXIDANT ACTIVITY:*

*The antioxidant activity of the plant was studied using free radical scavenging activity effect on hydroxyl radical mediated damage to deoxyribose and in vivo lipid peroxidation assay but did not show any significant effect.*

## [42]*INSECTICIDAL AND PESTICIDAL ACTIVITY:*

*The plant products of Vitex negundo are variously reported to possess insecticidal activity against stored product pests, mosquito larvae, house flies and tobacco leaf eating larvae. Leaf oil of the plant is shown to have repellent action against stored product pests.*

[41] *Munasinghe et al, 2001*
[42] *Deshmukh et al 1982, Prakash & Mathur 1985, Hebbalkar et al 1992.*

## *MATERIALS AND METHOD FOR PREPARATION*

### *COLLECTION OF TEST DRUG:*

*The green leaves of Vennochi of about 5 kilograms were collected from small trees at Nochodaiapatty village in Dindigul. The leaves were cleaned, free off impurities by hand picking method. Then leaves were dried under shadow for more than five days. After completing the process of drying, the running veins in the leaves were completely removed.*

### *AUTHENTICATION:*

*Gunapadam experts of the Gunapadm department of Siddha medical college, Palayamkottai, authenticated the trial drug. The preparation method was collected from Pathaartha Guna Vilakkam (Pg. no 478).*

### *PREPARATION:*

*The tattered leaves were ground into fine powder and the powder was again sieved with a white cloth (Vasthirakayam). The powder content thus obtained was weighed about 1 Kg and it was kept ready for analysis in a clean and uncontaminated container.*

### *Administration of the Drug:*

| | | |
|---|---|---|
| *Form of Medicine* | *:* | *CHOORANAM* |
| *Route of Administration* | *:* | *ORAL* |
| *Dose* | *:* | *1 gms* |
| *Anubanam (Vehicle)* | *:* | *Luke warm water* |
| *Times of Administration* | *:* | *Two times per day before food* |

## *STANDARDISATION OF THE DRUG*

## *PHYSICO-CHEMICAL ANALYSIS*

***PROCEDURES:***

***Total ash***

*Two grams of grounded air-dried Vennochi Ilai Chooranam was accurately weighed in a previously ignited and tared silica crucible. The drug was gradually ignited by raising the temperature to 450°C until it was white. The sample was cooled in a desiccator and weighed. The percentage of total ash was calculated with reference to air-dried drug.*

***Acid Insoluble ash***

*The ash was boiled with 25 ml of 2 M hydrochloric acid for 5 minutes, the insoluble matter was collected on an ash less filter paper, washed with hot water, ignited, cooled in a desiccator, and weighed. The percentage of acid insoluble ash was calculated with reference to the air-dried drug.*

***Water Soluble ash***

*The ash was boiled with 25 ml of water for 5 minutes, the insoluble matter on ash less filter paper collected, washed with hot water, ignited, cooled in a desiccator, and weighed. The weight of the insoluble matter from the weight of the total ash was subtracted; the difference represents the water soluble ash. The percentage of water insoluble ash was calculated with reference to the air-dried drug.*

***Moisture content:***

*The shade-dried Vennochi Ilai Chooranam was grounded in a mixer grinder. The powder passed through #40 and retained on #120. Accurately weighed 10 g of # 40/120 drug powder was kept in a tared evaporating dish. This was dried at 105°C for 5 hours in tray drier and*

*weighed. The drying was continued and weighing was done at one-hour interval until difference between two successive weighings corresponds to not more than 0.25 percent. Drying was continued until a constant weight was reached with two successiveweighings after drying for 30 minutes and cooling for 30 minutes in a desiccator wasshowing not more than 0.01 g difference.*

***Potential of Hydrogen (pH):***

*The pH scale is logarithmic and runs from 0.0 to 14.0 with 7.0 being neutral.*

*Readings less than 7.0 indicate acidic solutions, while higher readings indicate alkalineor base solutions.*

## [43]*BIO-CHEMICAL ANALYSIS OF VENNOCHI ILAI CHOORANAM*

***PREPARATION OF EXTRACT:-***

*5gms of the drug "Vennochi ilai Chooranam" is weighed accurately and placed in a 250ml clean beaker. Then 50ml of the distilled water is added to it and dissolved it well. Then it is boiled well for 10 minutes. It is cooled and filtered in a 100ml volumetric flask and then it is made up to 100ml with distilled water. Then the fluid is taken for analysis.*

***QUALITATIVE ANALYSIS:-***

| ***S.No*** | ***EXPERIMENT*** | ***OBSERVATION*** | ***INFERENCE*** |
|---|---|---|---|
| *1* | ***TEST FOR CALCIUM:*** *2ml of the above-prepared extract is taken in a clean test tube. 2ml of 4% Ammonium oxalate solution is added to it.* | *No white precipitate is formed* | *Indicates the absence of calcium* |
| *2* | ***TEST FOR SULPHATE:*** *2ml of the extract is added to 5% of barium chloride solution* | *No white precipitate is formed* | *Indicates the absence of sulphate* |
| *3* | ***TEST FOR CHLORIDE:*** *The extract is treated with silver nitrate solution* | *No white precipitate is formed* | *Indicates the absence of chloride* |
| *4* | ***TEST FOR CARBONATE:*** *The extract is treated with concentrated HCL* | *No brisk effervescences formed* | *Indicates the absence of carbonate* |

[43] Done at Govt. Siddha Medical College Palayamkottai

| | | | |
|---|---|---|---|
| *5* | ***TEST FOR STARCH:*** *The extract is added with weak iodine solution.* | *Blue colour is developed* | *Indicates the presence of starch* |
| *6* | ***TEST FOR IRON FERRIC:*** *The extract is treated with glacial acetic acid and potassium ferro cyanide.* | *No blue colour is formed* | *Indicates the absence of ferric iron* |
| *7* | ***TEST FOR IRON FERROUS:*** *The extract is treated with concentrated Nitirc acid and ammonium thio cyanate.* | *Blood red colour is formed* | *Indicates the presence of ferrous iron* |
| *8* | ***TEST FOR PHOSPHATE:*** *The extract is treated with ammonium molybdate and concentrated Nitirc acid.* | *Yellow precipitate is formed* | *Indicates the presence of phosphate* |
| *9* | ***TEST FOR ALBUMIN:*** *The extract is treated with Esbach's reagent.* | *No yellow precipitate is formed* | *Indicates the absence of Albumin* |
| *10* | ***TEST FOR TANNIC ACID:*** *The extract is treated with ferric chloride.* | *No blue black precipitate is formed* | *Indicates the absence of Tannic acid* |
| *11* | ***TEST FOR UNSATURATION:*** *Potassium permanganate solution is added to the extract.* | *It gets decolorized* | *Indicates the presence of unsaturated compound* |

| | | | |
|---|---|---|---|
| *12* | ***TEST FOR REDUCING SUGAR:*** *5ml of Benedict's qualitative solution is taken in a test tube and allowed to boil for 2 minutes and added 8 - 10 drops of the extract and again boil it for 2 minutes.* | *Colour change occurs* | *Indicates the presence of reducing sugar* |
| *13* | ***TEST FOR AMINO ACID:*** *One or two drops of the extract is placed on a filter paper and dried it well. After drying, 1% Ninhydrin is sprayed over the same and dried it well.* | *Violet colour is formed* | *Indicates the presence of Amino acid* |
| *14* | ***TEST FOR ZINC:*** *The extract is treated with potassium ferro cyanide.* | *No white precipitate is formed* | *Indicates the absence of zinc* |

***INFERENCE:-***

*The given sample of VENNOCHI ILAI CHOORANAM contains*

- *STARCH*
- *FERROUS IRON*
- *PHOSPHATE*
- *UNSATURATED COMPOUNDS*
- *REDUCING SUGAR*
- *AMINO ACID*

# [44]*PHARMACOLOGICAL ANALYSIS*

## *ANTI-SPASMODIC EFFECT OF VENNOCHI ILAI CHOORANAM ON ISOLATED RABBIT JEJUNUM*

***AIM:***

*To find out the Anti-spasmodic effect of VENNOCHI ILAI CHOORANAM on isolated Rabbit jejunum (Burn - 1952)*

***PREPARATION OF THE TEST DRUG:***

*1 gram of VENNOCHI ILAI CHOORANAM was dissolved in 10ml of water. Then it was used for the experiment.*

***SOLUTIONS REQUIRED:***

*Acetyl choline - 10µg/ml*

*Test drug - VENNOCHI ILAI CHOORANAM 100mg/ml*

***NUTRIENT SOLUTION:***

*Tyrode solution - 1 to 2 litres*

*Tyrode solution (1 litre)*

- *NaCl - 8 gms*
- *KCl - 0.2 gms*
- *$CaCl_2$ - 0.2 gms*
- *$MgSO_4$ - 0.26 gms*
- *$NaH_2PO_4$ - 0.05 gms*
- *$NaHCO_3$ - 1 gms*
- *Glucose - 1 gms*

***TISSUE USED:***

*Rabbit jejunum*

[44] Done at Govt. Siddha Medical College Palayamkottai

***APPARATUS REQUIRED:***

*Student's organ bath, Sherrington rotating drum, scissors, cotton thread etc.*

***PROCEDURE:***

*A rabbit was starved for 48 hours and was allowed only water ad-libitum. It was sacrificed by a blow on the head and by carotid bleeding. The abdomen was quickly opened and the ileocaecal junction was found out. A small piece of jejunum portion was cut, removed and placed in a dish, containing warm aerated Tyrode solution. The contents of lumen of the jejunum was gently rinsed out by pushing the tyrode solution into it. 3 cm length segment was cut from this part of ileum and was tied with thread on both ends separately without closing the lumen and the tissue was mounted in an organ bath, containing Tyrode solution maintained at $37^{o}C$, bubbled with air by an oxygen tube.*

*First the rotating drum was allowed to run for 1 minute to record the baseline. Drugs were given to study the inhibiting effect of Acetyl Choline. 0.2 ml of Acetyl Choline was added and the drum was allowed to run for 30 seconds. Thus the tissue was standardized and then the drum was stopped and the Acetyl Choline was washed out.*

*Again Tyrode solution was added to the organ bath till the level comes to the baseline. The drum was allowed to run for 1 minute. To the organ-bath, 1 ml of test drug was added, waited for one minute and 0.2 ml of Acetyl Choline was added and the drum was allowed to run for 30 seconds to record the inhibitory action of the test drug. Then 0.2 ml of Acetyl Choline was added to standardize the tissue. Then the tracing was labeled and fixed.*

***INFERENCE:***

*From the graph it is inferred that the test drug antagonize the effect of Acetyl Choline when added together. So, the drug* ***VENNOCHI ILAI CHOORANAM*** *has got* ***significant Anti-spasmodic activity.***

## *ANTI-HISTAMINE STUDY OF VENNOCHI ILAI CHOORANAM ON ISOLATED GUINEA PIG ILEUM*

***AIM:***

*To study the Anti-histamine effect of VENNOCHI ILAI CHOORANAM on isolated Guinea Pig ileum (Burn - 1952)*

***PREPARATION OF THE TEST DRUG:***

*1 gram of VENNOCHI ILAI CHOORANAM was dissolved in 10ml of water. Then it was used for the experiment.*

***SOLUTIONS REQUIRED:***

| | | |
|---|---|---|
| *Histamine* | - | *1 in 100000 strength* |
| *Anti-histamine* | - | *(PheniramineMaleate) 2.5 mg/ml* |
| *Test drug* | - | *VENNOCHI ILAI 100mg/ml* |

***NUTRIENT SOLUTION:***

*Tyrode solution - 1 to 2 litres*

*Tyrodesolution(1 litre)*

- *NaCl - 8 gms*
- *KCl - 0.2 gms*
- *$CaCl_2$ - 0.2 gms*
- *$MgSO_4$ - 0.26 gms*
- *$NaH_2PO_4$ - 0.05 gms*
- *$NaHCO_3$ - 1 gms*
- *Glucose - 1 gms*

***TISSUE USED:***

*Guinea Pig ileum*

***APPARATUS REQUIRED:***

*Student's organ bath, Sherrington rotating drum, scissors, cotton thread etc.*

***PROCEDURE:***

*An overnight fasted Guinea Pig weighing about 400 grams was sacrificed by a blow on the head and by carotid bleeding. The abdomen was suddenly opened and ileo-caecaljunction was found out. A small piece of ideal portion was cut and removed and placed in a dish containing warm aerated tyrode solution. The contents of lumen of ileum was gently rinsed by pushing tyrode solution into it. 3 cm length segment was cut from this part of ileum, and was tied with thread on both ends separately without closing the lumen and the tissue was mounted in an organ bath containing Tyrode solution maintained at $37^{o}C$ and bubbled with air by oxygen tube.*

*First the rotating drum was allowed to run for 1 minute to record the baseline. Drugs were given to study the inhibiting effect of Histamine. 0.2 ml of Histamine was added and the drum was allowed to run for 30 seconds. Thus the tissue was standardized and then the drum was stopped and the Histamine was washed out.*

*Again Tyrode solution was added to the organ bath till the level comes to the baseline. The drum was allowed to run for 1 minute. To the organ-bath, 1 ml of test drug was added, waited for one minute and 0.2 ml of Histamine was added to it and the drum was allowed to run for 30 seconds to record the inhibitory action of the test drug. Again the recordings were repeated by adding 0.2 ml of Anti- histamine and 0.2 ml*

*Histamine and the drum was allowed to run for 30 seconds to record the antagonistic action of Anti- histamine*

*There was an elevation in the graph from the baseline. Then 0.2 ml of Histamine was added to standardize the tissue. Then the baseline was labeled and fixed.*

***INFERENCE:***

*From the graph it is inferred that the test drug antagonize the effect of Histamine when added together. So, the drug* ***VENNOCHI ILAI CHOORANAM*** *has got* ***significant Anti-histamine activity.***

# [45]*ANTI - MICROBIAL ACTIVITY*

***- By KIRBY BAUER METHOD***

***AIM:***

*To determine the anti - microbial sensitivity of Vennochi ilai Chooranam by disc diffusion method – Kirby Bauer method.*

***PROCEDURE:***

***INOCULUM PREPARATION:***

*The microorganisms were inoculated in 10 ml of peptone water under sterile condition. The inoculum is incubated at 37'C for two hours. Then the turbidity of the inoculum is adjusted to 0.5 micro C farland standard. The inoculum was poured in a Muller Hington agar plate and uniformly spreaded over the plate. Staphylococcus aureus, Streptococcus pneumoniae, Pseudomonas aeruginosa are inoculated separately.*

***COMPONENTS OF MULLER HINGTON AGAR MEDIUM:***

| | | |
|---|---|---|
| *Beef Extract* | *:* | *300 gms / lit* |
| *Agar* | *:* | *17 gms / lit* |
| *Starch* | *:* | *1.5 gms / lit* |
| *Casein Hydroxylate* | *:* | *17.5 gms / lit* |
| *Distilled water* | *:* | *1000 ml.* |
| *PH* | *:* | *7.6* |

***DISC PREPARATION:***

*Vennochi ilai Chooranam is impregnated in a 6 mm diameter filter paper disc and applied over the inoculum. Then the Muller Hington agar plate is incubated at 37'C for overnight. The zone of clearance is measured with a scale and the sensitivity of the organism to the*

[45] Done at Malar Microbiological Laboratory, Palayamkottai

*Vennochi ilai Chooranam is assessed. Antimicrobial susceptibility is proportional to the diameter of the inhibitory zone around the disc.*

*The plates after 24 hrs incubation are observed for the zone of inhibition.*

***RESULT:***

| ***S.NO*** | ***TEST DRUG*** | ***ORGANISMS (Culture)*** | ***SUSCEPTIBILITY*** | ***ZONE SIZE (mm)*** | |
|---|---|---|---|---|---|
| | | | | ***Control*** | ***Test Drug*** |
| *1* | *VENNOCHI ILAI CHOORANAM* | *Staphylococcus aureus* | *Sensitive* | *23* | *21* |
| *2* | | *Streptococcus pnemoniae* | *Moderate* | *21* | *14* |
| *3* | | *Pseudomonas aeruginosa* | *Resistive* | *-* | *-* |

## [46]*S E M – SCANNING ELECTRON MICROSCOPE*


*Scanning Electron Microscope (SEM) have been widely used for the characterization of surface topography, bulk chemical composition and the structure of thin specimens. SEM has facility for detecting secondary and back-scattered electrons. The use of incident electron beams with energybetween 2 & 40keV. The secondary electrons and orbital knocked out of sample atoms by collision with the incident electron beam. When the electron beam impinges on this specimen induce secondary electrons, Rutherford back scattered, Auger electrons, and various energies were produced. These energies provide information about the surface topography, crystallography, grain size etc. The escape depth of secondary electrons is low due to their low energy. Consequently these electrons are generated at a specimen depth of few nanometers in metal to a few tens of nanometer in insulator. If the specimen is not a conductor, it is necessary to provide a conducting surface to deposit gold or some other metal.*

[46] Done at Anna University, Chennai

## [47]F T I R – FOURIER TRANSFORM INFRARED SPECTROMETRY

*The infrared spectrum originates from the vibrational motion of the molecule. The vibrational frequencies are a kind of fingerprint of the compounds. This property is used for characterization of organic and inorganic compounds. The band intensities are proportional to the concentration of the compound and hence qualitative estimations are possible. The IR spectroscopy is also carried out by using Fourier transform technique. The interference pattern obtained from a two beam interferometer as the path difference between the two beams is altered, when Fourier transformed, gives rise to the spectrum. The transformation of the interferogram into spectrum is carried out mathematically with adedicated on-line computer. The FT-IR instrument consists of globar and mercury vapour lamp as sources, an interferometer chamber comprising of KBr and mylar beam splitters followed by a sample chamber and detector. Entire region of 450-4000*

[47] Done at Anna University, Chennai

*cm-1 is covered by this instrument. The spectrometer works under purged conditions. Solid samples are dispersed in KBr or polyethylene pellets depending on the region of interest. This instrument has a typical resolution of 1.0 cm-1. Signal averaging, signalenhancement, base line correction and other spectral manipulations are possible. Infrared spectrum is useful in identifying the functional groups like -OH, -CN, -CO, -CH, -NH2, etc. Also quantitative estimation is possible in certain cases for chemicals, pharmaceuticals etc.*

## *CLINICAL ASSESSMENT*

*The main objective of this clinical study is to evaluate the efficacy of the trial drug Vennochi ilai chooranam on Eraippu erumal. There is a growing interest regarding the pharmacological evaluation of various herbal drugs used in traditional system of medicine. The revival of interest in natural drugs started in last decade mainly because of the wide spread belief that green medicine is healthier than synthetic products. The number of individuals suffering with allergic illnesses is increasing in the industrialized, as well as in developing countries. This study is aimed to evaluate the efficacy of Vennochi ilai chooranam on such allergic disease as bronchial asthma.*

***Objectives:***

- *To evaluate the Broncho dilator and anti-histaminic activity of Vennochi ilai chooranam.*
- *To explore the efficacy of Vennochi ilai chooranam in OP patients with bronchial asthma.*

***Design of the Study:***

- *The Open clinical trial phase-2B*

***Study Centre****:*

*Govt. Siddha medical college and hospital, Palayamkottai.*

***Study Participants:***

*Both men and women and members of all races and ethnic groups were eligible for this trial. Treatment was being administered on an inpatient/outpatient basis. The patients were selected from the In-patient and Out-patient department of Govt Siddha medical college and hospital, Palayamkottai.*

***Number of Subjects:***

*Number of participants will be 35 - 40.*

***Registration Process:***

*To register a patient, the following documents should be completed by the investigator.*

- *Copy of required laboratory tests*
- *Signed patient consent form*
- *Other appropriate forms (e.g., Trial profoma).*

*This Clinical trial is an ethical and scientific quality standard for designing, conducting and recording trials that involve the participation of human subjects. Compliance with this standard provides assurance to public that the rights, safety and well being of trial subjects are protected, consistent with the principles enshrined in the Declaration of Helsinki and ensures that clinical trial data are credible*

***Selection of patients:***

*The Clinical trial is usually focus on asthma control as measured by pulmonary function test, symptom scores and medication requirement. After taking the short history of patient, all the selected cases were carefully examined and records were maintained. To arrive at the diagnosis along with the history taking and the following investigations were done. The patients were selected for clinical trials as per the following criterias, which are listed below*

- *Recurrent wheezing*
- *Coughing*
- *Trouble in breathing*
- *Chest tightness*
- *Symptoms that occurs or worsen at night*

- *Symptoms that are triggered by cold air,exercise or exposure to dust,smoke and pollens*
- *Family history also taken.*

***Consent form:***

*Patients were included in this clinical study only after getting the concern form accordance of ‗Helsinki'. Voluntary written assent of a subject's willing to participate in this study and in its documentation. The confirmation is sought only after information about the trial including an explanation of its status as research, its objectives, potential benefits, risks and inconveniences, alternative treatment that may be available and of the subject's rights and responsibilities have been provided to the potential subject. The patients were selected for clinical trials as per the following criteria, which are listed below*

***Inclusion criteria:***

- *Co operative patient*
- *Cough with expectoration*
- *Expiratory wheeze*
- *Tightness of the chest*
- *Positive allergic history*
- *History of previous attack*

***Exclusion criteria:***

- *Infectious disease patient*
- *Pulmonary tuberculosis*
- *Malignancy*
- *Renal diseases*
- *Cardio vascular diseases*
- *Cardiac Asthma*

- *Renal Asthma*
- *Status asthmaticus*
- *Urenic Asthma*

***Withdrawal criteria:***

- *Exacerbations of symptoms*
- *Unacceptable adverse events*
- *Patient decided to withdraw from the study*
- *Irregular visit*
- *Irregular Medications*
- *Alcohol intake*

***Investigations criteria:***

***Blood**: TC, DC, ESR, Hb, blood sugar PP.*

***Urine**: Routine examination*

***Chest:** X-ray*

*Sputum for AFB*

***P F M – PEAK FLOW METER:***


***"PEAK FLOW METER FOR ASTHMA IS LIKE THERMOMETER FOR FEVER"***

*PFM indicates what happens and how much air moves in lungs.*

***USAGE:***

*Insert the mouth piece into the meter and reset the indicator of PFM by shaking the meter until the yellow indicator is resting with the diamond shape near the mouth piece. Do not obstruct the holes at the end of PFM, stand up if possible & take a deep breath place the meter in mouth and close lips around the mouth piece. Blow out as hard and fast as possible.*

*Note the number on the scale indicated by pointer & repeat the procedure twice & take the highest reading.*

***Green zone:***

*PEFR 80 to 100% of personal best. Indicates free of symptoms and can maintain current Asthma management program.*

***Yellow zone:***

*PEFR 50 to 80% of personal best. Indicates that Asthma is worsening & medication to be taken.*

***Red zone:***

*PEFR below 50% of personal best. Indicates the Danger situation.*

***Spirometry:***

*The spirometry is an important tool used for generating pneumotachographs, which are helpful in assessing asthma.*

***Procedure:***

*The basic forced volume vital capacity (FVC) test varies slightly depending on the equipment used. Generally, the patient is asked to take the deepest breath they can, and then exhale into the sensor as hard as possible, for as long as possible, preferably at least 6 seconds. It is sometimes directly followed by a rapid inhalation (inspiration), in particular when assessing possible* ***upper airway obstruction.***

*Sometimes, the test will be preceded by a period of quiet breathing in and out from the sensor (tidal volume), or the rapid breath in (forced inspiratory part) will come before the forced exhalation.*

*During the test, soft nose clips may be used to prevent air escaping through the nose. Filter mouthpieces may be used to prevent the spread of microorganisms.*

***Parameters:***

*The most common parameters measured in spirometry are Vital capacity, forced vital capacity, Forced expiratory volume and Maximal voluntary ventilation.*

***Drug and dosage:***

***Drug :****Vennochi ilai chooranam*

***Route :*** *Enternal*

***Dose :*** *1 gmtwice a day (After food)*

***Vehicle :*** *Luke warm water*

***Dietery advice:***

*Therapeutic foods or **nutrients** that help controlling asthma are: Omega-3 and omega-6 **fatty acids**, foods high in flavonoids and beta carotene, Vitamin B12, Vitamin B6 (Vitamin B6 deficiency is common in asthmatics), high amounts of **vitamin B12 supplements** (1,500 mcg per day) have been found to reduce the tendency for asthmatics to react to sulfites, Selenium, **Vitamin E, Vitamin C,** and Magnesium (magnesium can prevent spasms of the bronchial passages).*

***Medical advice:***

- *Patients are advised to avoid known offending allergen which is identified either by experience or by skin sensitivity test.*
- *Take light meals at night and try to sleep early*

- *Drink plenty of water*
- *Try to avoid dust, cigarette smoke and smoky surroundings.*
- *Avoid cold water bath.Avoid cold, deep fried food.*
- *Avoid keeping pets such as dogs, cats.*
- *Avoid alcohol, lime and bananas.*
- *Advice to do breathing exercise*

***Criteria for assessment of response to therapy:***

- ***Marked Relief:*** *75%-90% relief in the presenting signs and symptoms marked normality pathological investigation.*
- ***Moderate Relief:*** *60%– 75% relief signs and symptoms, moderate normality of pathological investigation.*
- ***Mild Relief:*** *50%-60% relief of signs and symptoms no marked changes in pathological investigations.*
- ***Poor:*** *Below 50% relief of signs and symptoms*

***Observation:***

- *The duration of the treatment ranged between 45-90 days.*
- *At the time of treatment, no adverse effects were observed.*
- *The drug was well accepted by all the patients.*

## *BIO – STATISTICAL ANALYSIS*

***ANALYSIS OF DATA:***

*The Eraippu Erumal clinical trials in respect of the drug* ***Vennochi ilai chooranam*** *are described according to their demographic characters such as sex and age in terms of percentages and averages. The effectiveness of the drug in controlling the Eraippu Erumal is analysed and interpreted by the student's paired 't' test. The p- values <0.05 are considered as significant.*

***RESULTS AND OBSERVATION:***

***Description of the clinical trials of Vennochi ilai chooranam****was described according to their sex and age as follows.*

| ***Age group (years)*** | ***Male*** | | ***Female*** | | ***Total*** | |
|---|---|---|---|---|---|---|
| | ***No*** | ***%*** | ***No*** | ***%*** | ***No*** | ***%*** |
| *20 -29* | *-* | *-* | *1* | *4.34%* | *1* | *2.50%* |
| *30 – 39* | *1* | *5.88%* | *3* | *13.04%* | *4* | *10%* |
| *40 -49* | *7* | *41.17%* | *13* | *56.52%* | *20* | *50%* |
| *50 -59* | *7* | *41.17%* | *4* | *17.39%* | *11* | *27.50%* |
| *60 – 69* | *1* | *5.88%* | *2* | *8.69%* | *3* | *7.50%* |
| *70 – 79* | *1* | *5.88%* | *-* | *-* | *1* | *2.50%* |
| *Total* | *17* | *42.50%* | *23* | *57.50%* | *40* | |

*The age and sex wise distribution was shown in the above table. The male participation was 42.50% and the female participation was 57.50%*

***Comparison of Male and Female according to their age distribution:***

| *Sex* | *Age (years)* | | *Difference of means* | *'t'* | *Significance* |
|---|---|---|---|---|---|
| | *Mean* | *Standard Deviation* | | | |
| *Male* | *50.71* | *9.80* | *5.44* | *3.5* | *P < 0.01* |
| *Female* | *45.26* | *8.04* | | | |

*This table reveals the difference of age between the male and female clinical trials. The mean age of the males was 50.71 ± 9.80 years and the same of the females was 45.26 ± 8.04 years. The difference between the mean ages was statistically significant (p<0.01).*

***Assessment of related variables:***

*The variables which were related to the diseases such as E.S.R ½ hour,E.S.R one hour and respiratory rate, PEFR were assessed before administration of the drug and after completion of the course of the drug.*

***Assessment of E.S.R ½ hr before and after administration of the drug:***

| *Level of E.S.R at half an hour (mm)* | *Before treatment* | | *After treatment* | |
|---|---|---|---|---|
| | *Frequency* | *%* | *Frequency* | *%* |
| *0 -10* | *32* | *80.0* | *39* | *97.5* |
| *10-20* | *8* | *20.0* | *1* | *2.5* |
| *20-30* | *-* | *-* | *-* | *_* |
| *Total* | *40* | *100.0* | *40* | *100.0* |

*The above table states that the E.S.R level at ½ hr for the patients before undergoing the course of the drug after completion of the course. Before the course of the drug 90.24% of the patients had E.S.R ½ hr level in between 0 – 10mm. The remaining 9.76% had their level above 10 mm. After the course of the drug 95.12% of the subjects had 0- 10mm and the remaining 4.88% had that level above 10 mm.*

***Assessment of E.S.R for 1 hr before and after taken the drug.***

| ***Level of E.S.R at one hour (mm)*** | ***Before treatment*** | | ***After treatment*** | |
|---|---|---|---|---|
| | ***Frequency*** | ***%*** | ***Frequency*** | ***%*** |
| *0 -10* | *15* | *37.5* | *33* | *82.5* |
| *10-20* | *19* | *47.5* | *7* | *17.5* |
| *20-30* | *3* | *7.5* | *-* | *-* |
| *30- 40* | *3* | *7.5* | *-* | *-* |
| *40-50* | *-* | *-* | *-* | *-* |
| *Total* | *40* | *100.0* | *40* | *100.0* |

*The before and after administration of the drug, the level of E.S.R. at 1 hour was shown in the above table. Majority (47.5%) of the cases had their E.S.R level between 10 – 20 mm and 37.5% of them had 0-10 mm. The level 20-30 mm was 7.5%. The remaining had their E.S.R at one hour is above 30 mm.*

*After the drug administration, 82.5% of the cases had their level of E.S.R between 0 -10 mm. Then the level of E.S.R at one hour between 10-20 mm is 17.5%.*

***Assessment of Respiratory Rate before and after the drug administration:***

*The respiratory rate of the study subjects before and after administration of the drug as follows.*

***Assessment of RR before and after the drug administration:***

| ***Level of Respiratory Rate*** | ***Before*** | | ***After*** | |
|---|---|---|---|---|
| | ***Frequency*** | ***%*** | ***Frequency*** | ***%*** |
| *15-20* | *9* | *22.5* | *36* | *90.0* |
| *20-25* | *26* | *65.0* | *4* | *10.0* |
| *25-30* | *5* | *12.5* | *-* | *-* |
| *30-35* | *-* | *-* | *-* | *-* |
| *35-40* | *-* | *-* | *-* | *-* |
| *Total* | *40* | *100.0* | *40* | *100.0* |

*The respiratory level of the study subjects before and after the drug administration was shown in the above table. The respiratory level 15 – 20 before and after were 22.5% and 90.0% respectively. The level 20 – 25 of before and after were 65.0% and 10.0%, respectively. The level 25 – 30 before and after were 12.5% and 0% respectively. And there is no repiratory rates were complained on 30-35 and 35-40 levels.*

***Assessment of PEFR before and after the drug administration:***

| ***Level of PEFR*** | ***Before Treatment*** | | ***After Treatment*** | |
|---|---|---|---|---|
| | ***Frequency*** | ***%*** | ***Frequency*** | ***%*** |
| *50-100* | *5* | *12.5* | *-* | *-* |
| *100-150* | *8* | *20.0* | *-* | *-* |
| *150-200* | *16* | *40.0* | *5* | *12.5* |
| *200-250* | *4* | *10.0* | *4* | *10.0* |
| *250-300* | *7* | *17.5* | *-* | *-* |
| *300-350* | *-* | *-* | *27* | *67.5* |
| *350-400* | *-* | *-* | *4* | *10.0* |
| *Total* | *40* | *100.0* | *40* | *100.0* |

*The PEFR value of the study subjects before and after the drug administration was shown in the above table. The PEFR value was maximum 40% between 150-200 before treatment and was maximum 67.5% between 300-350 after treatment.*

***Effectiveness of the drug Vennochi ilai chooranam***

*The effectiveness of the drug* ***Vennochi ilai chooranam*** *was analysed by comparing the averages before and after administration of the drug in respectof E.S.R at ½ hr, 1 hr and RR, PEFR.*

***Effectiveness of the drug Vennochi ilai chooranam***

| ***Variables*** | ***Before Treatment*** | | ***After treatment*** | | ***Difference*** | | ***'t'*** | ***Significance*** |
|---|---|---|---|---|---|---|---|---|
| | ***Mean*** | ***S.D*** | ***Mean*** | ***S.D*** | ***Mean*** | ***S.D*** | | |
| *E.S.R ½ an hour(mm)* | *8.30* | *4.14* | *4.68* | *2.36* | *3.62* | *1.78* | *6.373* | *p<0.01* |
| *E.S.R 1 hour(mm)* | *14.48* | *7.53* | *8.25* | *3.47* | *6.23* | *4.06* | *3.62* | *p<0.001* |
| *RR* | *23.65* | *2.81* | *17.05* | *2.09* | *6.60* | *0.72* | *3.59* | *P<0.001* |
| *PEFR* | *181* | *58.60* | *309.50* | *57.84* | *128.5* | *0.76* | *0.757* | *P<0.01* |

*The above table shows the effectiveness of the drug. The mean E.S.R. ½ hr before and after the drugs were 8.30 ± 4.14 and 4.68 ± 2.36 mm. The difference of mean was statistically significant (p<0.01). Similarly the E.S.R at 1 hr before and after the drug were 14.48 ± 7.53 and 8.25 ± 3.47 mm. The mean difference was statistically highly significant (p<0.001). Before administration of the drug the mean RR level was 23.65 ± 2.81 and the same after administration was 17.05 ± 2.09. The difference between the means was statistically very significant (p<0.001). The mean PEFR value before and after the drugs were 181 ± 58.06 and 309.50 ± 57.84. The difference between the means was statistically very significant (p<0.01).*

| S. No: | Category of prognosis | No: of Subjects | Percentage |
|---|---|---|---|
| 1. | Good | 33 | 82.5 |
| 2. | Fair | 6 | 15 |
| 3. | Poor | 1 | 2.5 |
| **Total** | | 40 | 100.0 |

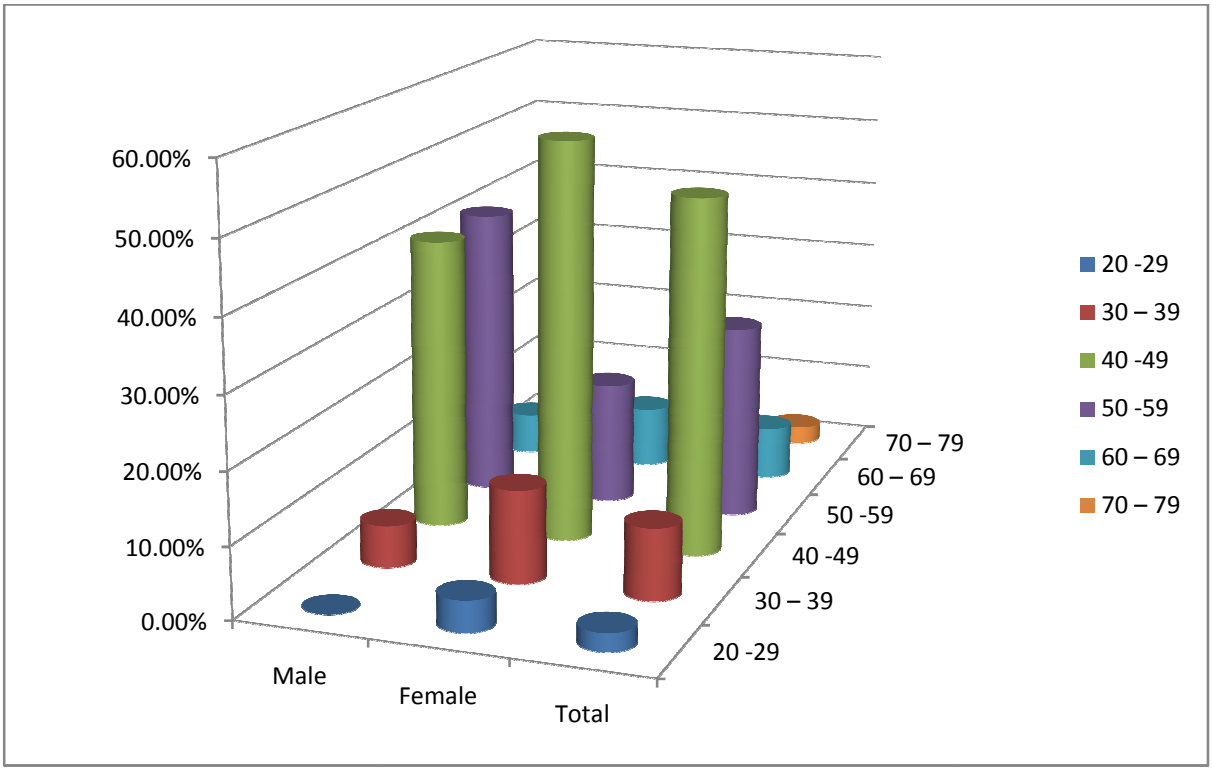
***Prognosis of the drug:***

*The above table shows the response of the drug was good among the 73% of the subjects. The remaining 19% and 8% of the subjects were fair and poor response of the drugs respectively.*

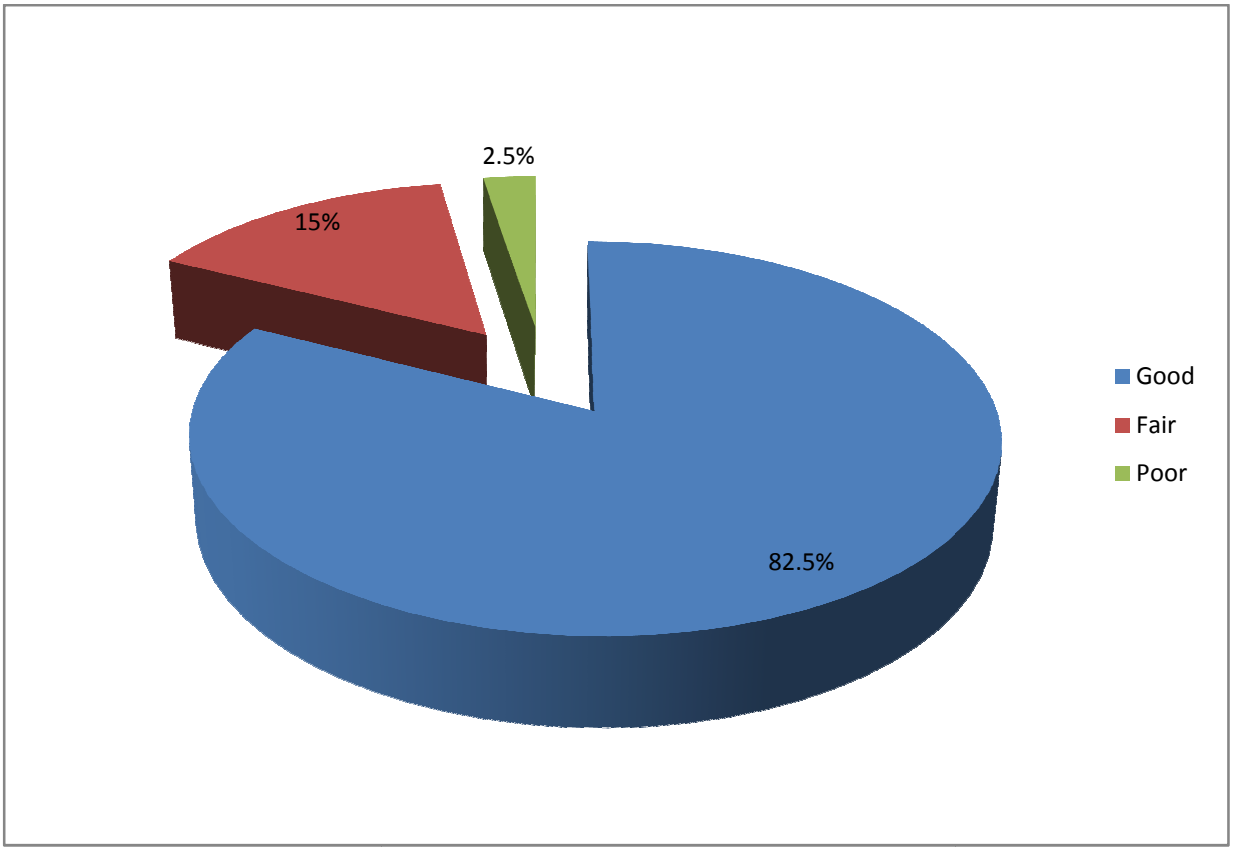
***INFERENCE:***

*The drug* ***Vennochi ilai chooranam*** *was effective and showed good response to Eraippu Erumal clinical trials.*

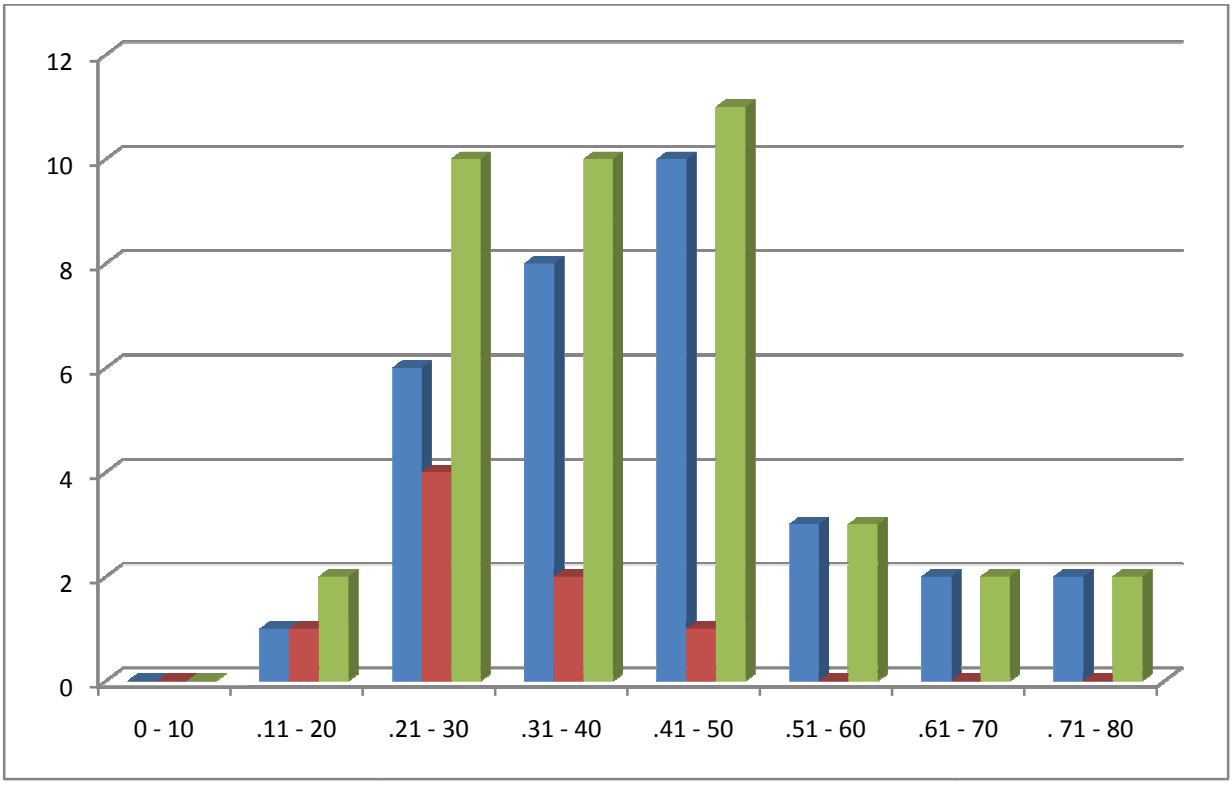
## Age and Sex wise Distribution



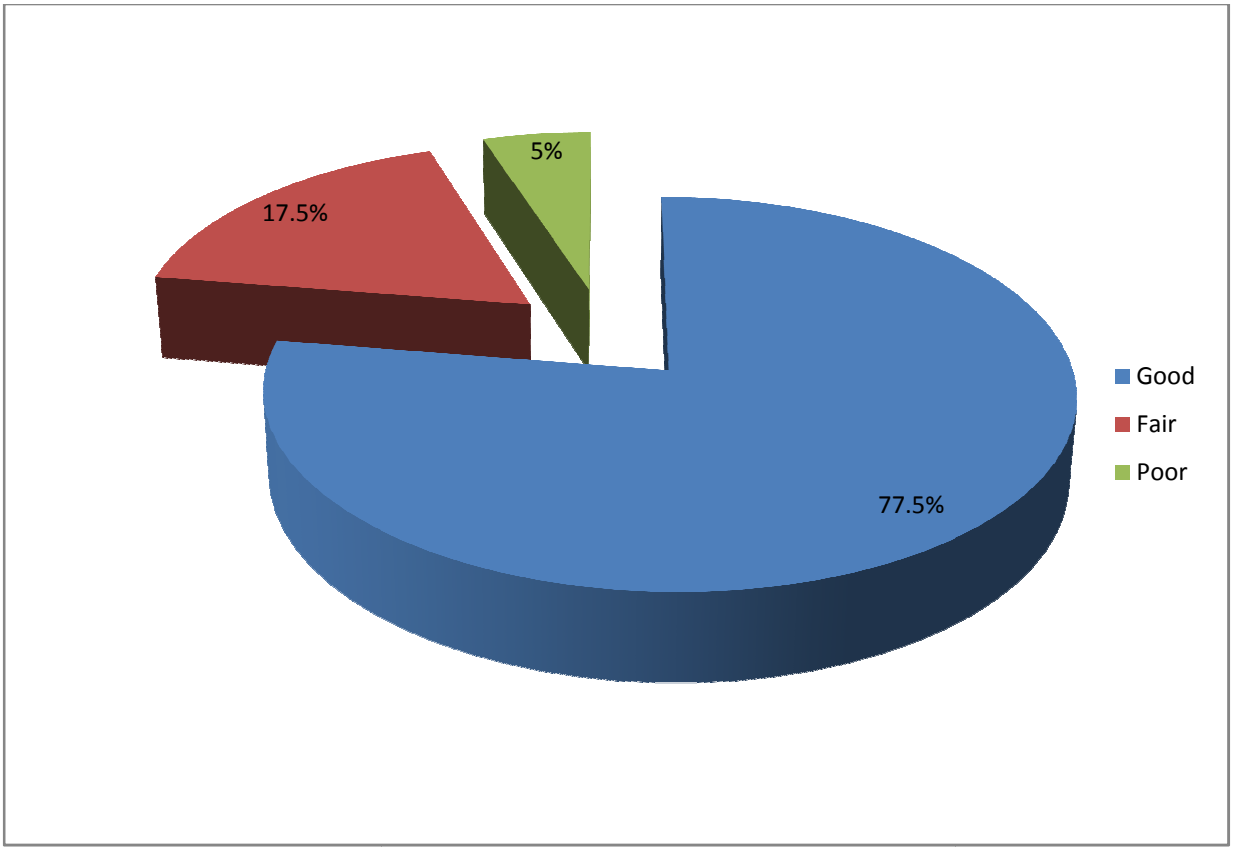

## Performance Chart



## Age and Sex wise Distribution




## Performance Chart



## *RESULTS AND DISCUSSIONS*

*Diversified studies were carried out on the trial drug Vennochi ilai chooranam to prove its pre clinical safety and clinical efficiency. The study includes literature collections, Physico chemical analysis, Pharmacological analysis, Microbiological analysis and Clinical analysis.*

*The therapeutical efficiency of the drug in treating Bronchial Asthma is put on many literature in different formulations.*

*From the literatures, the trial drug Vennochi ilai chooranam has got Astringent, Pungent, Bitter taste, hot potency and Acid biotransformation.*

*As per Siddha concept, the derangement of Kabha humour is the basic abnormality in Eraippu Erumal (BA).*

*[48]"கபத்தினையன்றிக் காசசுவாசங்-காணாது".*

*The properties of the trial drug – Pungent, Bitter & Astringent taste has the tendency to mitigate the harmful effects of the vitiated kabha humour.*

*"[49]. .....கிளிமொழியே*
*கார்ப்பினிப்பு விஞ்சிற் கபம்விஞ்சுஞ் சட்டிரதச்*
*சேரப்புணர் நோயணு காதே".*

### *PHYSICO CHEMICAL ANALYSIS*

*The colour of the Vennochi Ilai Chooranam sample is same in both the ordinary and the UV light. The total ash value is 6.65%, acid insoluble ash is 0.41%, so acid insoluble ash is very low denoting that it gets digested fully in our GI track without provoking any ill effects. So this study helps to standardize the preparatory method of this herbal formulations.*

[48] தேரையர் - பிணிகளின் முதற்காரணம் - நோய் முதனாடல் திரட்டு பாகம் - 1 பக்கம் 363
[49] நோய் முதனாடல் திரட்டு பாகம் - 1 பக்கம் 23

***[50]BIOCHEMICAL ANALYSIS:***

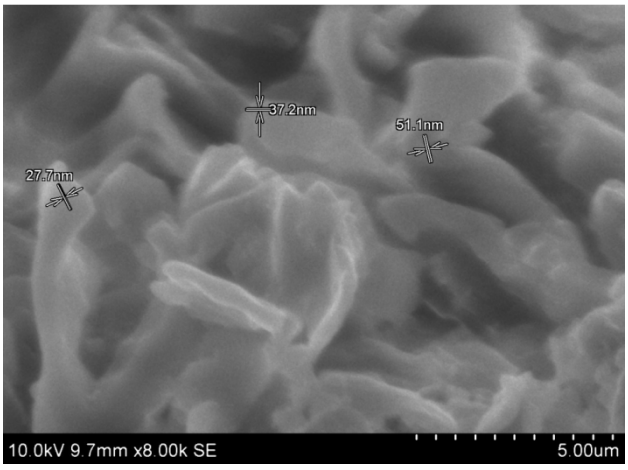
*Bio chemical analysis reveal the presence of starch, ferrous iron, phosphate, unsaturated compound, reducing sugars and Amino acids.*

*Presence of **ferrous iron** increase the haemoglobin concentration in the blood, enhancing the oxygen availability of the cells. The drug prevent hypoxaemia.*

***Phosphate** is the most abundant intracellular anion and is essential for membrane structure, energy storage and transport in cells. Phosphate is also necessary in red blood cells for production of 2 – 3 diphosphoglycerate which facilitates release of oxygen from haemoglobin. Thus increases the oxygen availability of the cells.*

*The presence of **amino acid** promotes the immune system of the body. The ferrous iron is also associated with effective immune competence of the body.*

***S E M – PICTURE OF VENNOCHI ILAI CHOORANAM:***




*The SEM images of the powdered vennochi ilai chooranam showed a fluffy and wavy structure. It looks like flowers petal. The structure is not uniform in shape and it is agglomerated. The average size of the particle 37 nm.*

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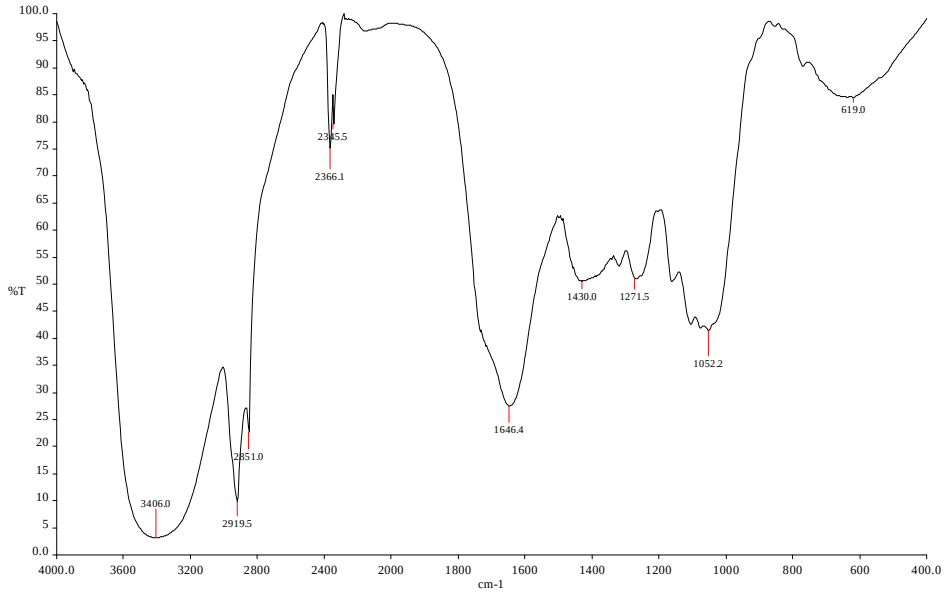
[50] *Ambika Shanmugam, Fundamental of Bio chemistry – Pg. 690, Emedicine medscape.com – Devon. J. Moore*

***FTIR - SPECTRUM OF VENNOCHI ILAI CHOORANAM :***




*~2.SP 3601 4000.0 400.0 3.1 100.0 4.0 %T 4 2.0*

*PT*

*REF 4000 98.5 2000 98.2 600*

*3406.0 3.1 2919.5 9.7 2851.0 22.7 2366.1 75.1 2345.5 79.5*

*1646.4 27.5 1430.0 50.6 1271.5 51.0 1052.2 41.4 619.0 84.5*

***END 10 PEAK(S) FOUND***

*The peak at 3406 cm-1 indicates the presence of hydroxyl group. The peaks of 2919 and 2851 cm - 1 indicates the alkane group in the compound. The peaks at 1271 and 1052 cm-1 represent the unsymmetrical ether group in the compound. The peak of 619 cm-1 showed the availability of halidegroup. The peaks at 1646 and 1430 cm-1 corresponds to the presence of alkene and amide groups, respectively.*

***Pharmacological study:***

*Greater than 50 different mediators have been implicated in bronchial asthma, among these histamine is the major targeting mediator in the treatment of Asthma. The trial drug Vennochi ilai Chooranam excerted antagonistic effect on histamine induced*

*contraction, manifesting the marked anti histaminic activity in isolated guinea pig ileum.*

*The trial drug Vennochi ilai chooranam also excerted significant anti spasmodic activity by antagonizing the effect of a acetyl choline in isolated rabbit jejunam.*

***Microbiological activity:***

*The microbial activity shows test drug is sensitive for staphylococcus aures and moderately sensitive for streptococcus pneumoniae.*

***Statistical Analysis:***

*The effectiveness of the drug in controlling the Eraippu Erumal is analysed and interpreted by students paired 't' test. P values less than 0.05 were considered as significant.*

## *SUMMARY*

*The test drug Vennochi ilai chooranam is selected from the text PATHAARTHA GUNA VILAKKAM (Pg. No. 478) for the evaluation of safety, efficacy and theraupeutical potency on Bronchial Asthma patients.*

*A brief description pertaining to its Botanical aspect has been referred.*

*A review of the literatures about the Vitex negundo and its significance in Gunapadam aspect since ancient period has been done.*

*Bio chemical analysis shows the presence of starch, ferrous iron, phosphate, unsaturated compounds, reducing sugar and amino acid.*

*Pharmacological analysis shows that the drug has got significant Anti – spasmodic activity and good Anti – Histaminic activity.*

*Hence it can be concluded that this drug may inhibit the tone of tracheal and bronchial muscles and thus has a good bronchodilator action.*

*After the above evaluation, the drug* ***Vennochi ilai chooranam*** *is subjected to clinical trial. The open clinical trial results that* ***82.50% of patient were having goodimprovement*** *and* ***15% were having fair improvement.***

*From the above pre clinical & clinical observation, it is inferred that Vennochi ilai Chooranam, which is a simple cost effective medicine has got significant effect on Bronchial Asthma.*

## *CONCLUSION*

*Vennochi ilai Chooranam was selected for the elaborate study of its efficacy on Eraippu Erumal (BA).*

*From the literature review physico-chemical,pharmacological, microbiological, biochemical, instrumental analysis it has been concluded that Vennochi ilai Chooranam has got a good Anti spasmodic and Anti histaminic activity and hence effective for Eraippu Erumal.*

# INTRODUCTION

*Siddha comes from the word **"Siddhi"** which means perfection or eternal bliss. These are referred as the supernatural power, which gave the ancient saints the designation of Siddhars. By the virtue of these powers, Siddhars employed their knowledge for the benefit of the mankind.*

*According to Siddha, medical science the world is made up of five basic material elements i.e. Panchabootham (Prithvi, Appu, Theyu, Vaayu and Aagayam) and the worldly objects are classified into two categories namely movable & immovable. This concept has been rightly declared by an old saying*

***"CLASSIFYING ALL MOVABLE AND IMMOVABLE THINGSWITHIN THE CLASSIFICATION OF FIVE MATERIAL ELEMENTS"***

*According to this, the human body is the replica of universe and so similar are the food & drug to man as explained in **ANDAPINDA THATHUVAM**. The thathuvam explains the relationship between the universe and human body. These two are interlinked and vividly explained through the five basic principles "**PANCHABOOTHAAS"**. The structural aspect of human body is said to be "**UDAL THATHUS"** (i.e. the physical component of the human body) and the functional units of the human body is said to be **"UYIR THATHUS"** (the physiological units i.e. Vatham, Pitham and Kapham). The functional co-operation of these two are essential for the maintenance of health.*

*In Siddha system, thousands of drugs are used. These drugs are categorized into three groups, namely herbal products, metal-mineral products and animal products. In this, the herbal products formulate more than 80% of the Siddha medicines. However, in certain life*

*threatening diseases and in many chronic diseases the herbal medicines alone are not much effective. In such conditions, Siddha enumerated some herbo-metal and herbo-mineral formulations. Minerals are classified as metals metals, salts (karasarangal), arsenic compounds and secondary minerals.*

*Among karasarangal, Vediuppu (Potassium nitrate) one such karasaram, a fire based salt element with demulcent, diuretic action was depicted for Kalladaippu i.e. Urolithiasis as emphasized in the literature Kannusamy parambarai vaithiyam (Pg. no. 371).*

*Urinary stones have afflicted humans since the dawn of history. The first known stones have been discovered in Egyptian mummies. In 1901, the English archeologist E. Smith found a bladder stone from a 4500 – 5000 year old mummy in El. Amrah, Egypt.*

*Such a historical disease Kalladaippu has become as a very common ailment nowadays due to modern food habits and work nature. Therefore, I have chosen the Vediuppu Chendhuram to prove its efficacy on Kalladaippu by pre-clinical and clinical studies.*

# AIM AND OBJECTIVES

***AIM:***

*Urolithiasis constitutes one of the commonest diseases in our country and it is mostly known that the pain due to kidney stones is worse than that of labour pain. In India, approximately 5 – 7 million patients suffer from stone disease and at least 1/1000 of Indian population needs hospitalization due to kidney stone disease and sometimes many of them are subjected to unwarranted surgical intervention. But in Siddha system of medicine affords treatment for all kinds of diseases with simple preparations. One of such simple medication is Vediuppu Chendhuram from the treasury of Siddhars. The aim is to evaluate the safety and efficacy of Vediuppu Chendhuram on Urolithiasis by pre-clinical and clinical trial.*

***OBJECTIVES:***

*The main objectives of the study are*

- *To collect the literature evidence regarding the trial medicine.*
- *To get proper authentication.*
- *To prepare the trial medicine as per the text.*
- *To standardize the trial drug.*
- *To evaluate the lithotriptic, diuretic and anti-spasmodic activity of the trial drug pre-clinically.*
- *To evaluate the therapeutical efficacy of the drug through open clinical trial.*

## *REVIEW OF LITERATURE*
## *GEO-CHEMICAL ASPECT*

***POTASSIUM NITRATE:[Nitre or Indian Saltpeter KNO3 or Fullers earth]***

*[1]Telugu – Patlu-uppu*

*Mal – Vetii-uppu*

*Can – Patluppu*

*Malay – Sundawa*

*Hindi - Shora*

*Potassium nitrate is a chemical compound with the formula KNO3. It is an ionic salt of potassium ions K+ and nitrate ions NO3 –. It occurs as mineral nitre and is a natural solid source of nitrogen. Potassium nitrate is one of several nitrogen-containing compounds collectively referred to as saltpeter.*

*Occurance - In India it occurs in Haryana and Bengal*

***PROPERTIES:***

| | | |
|---|---|---|
| *Molecular formula* | *–* | *KNO3* |
| *Molar mass* | *-* | *101.1032 g/mol* |
| *Appearance* | *-* | *white solid* |
| *Odour* | *-* | *odourless* |
| *Density* | *-* | *2.109 g/cm3 (16 °C)* |
| *Melting point* | *-* | *334 °C* |
| *Boiling point* | *-* | *400 °C decomp.* |
| *Solubility in water* | *-* | *133 g/L (0 °C)* |
| | | *383 g/L (25 °C)* |
| *Solubility* | *-* | *slightly soluble in ethanol, soluble in glycerol, ammonia* |
| *Acidity* | *-* | *~7* |

[1] Indian material Medica 91

*Refractive index - 1.5056*

*Crystal structure - Orthorhombic*

***OCCURANCE:***

*Crude nitre occurs as an efflorescence on the surface of the earth in tropical countries like India.*

***[2]PRODUCTION:***

*Potassium nitrate can be made by combining ammonium nitrate and potassium hydroxide.*

$$NH4NO3\ (aq) + KOH\ (aq) \rightarrow NH3\ (g) + KNO3\ (aq) + H2O\ (l)$$

*Potassium nitrate can also be produced by neutralizing nitric acid with potassium hydroxide.*

$$KOH\ (aq) + HNO3 \rightarrow KNO3\ (aq) + H2O\ (l)$$

*On industrial scale it is prepared by the double decomposition reaction between sodium nitrate and potassium chloride.*

$$NaNO3\ (aq) + KCl\ (aq) \rightarrow NaCl\ (aq) + KNO3\ (aq)$$

***[3]USES:***

***Fertilizer*** *- Potassium nitrate is mainly used in fertilizers, as a source of nitrogen and potassium – two of the macronutrients for plants. When used by itself, it has an NPK rating of 13-0-44.*

***Oxidizer*** *- Potassium nitrate is an efficient oxidizer, producing a lilac-colored flame upon burning due to the presence of potassium. It is also used in fireworks such as smoke bombs, made with a mixture of sucrose and potassium nitrate. It is also added to pre-rolled cigarettes to maintain an even burn of the tobacco and is used to ensure complete combustion of paper cartridges for cap and ball revolvers.*

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[2] *Text book of inorganic chemistry -P.L.Soni* ***2.132***

[3] *Text book of inorganic chemistry -P.L.Soni* ***2.132***

***Food preservation*** *- In the process of food preservation, potassium nitrate has been a common ingredient of salted meat it is also approved for use as a food additive in European Union.*

***Food preparation*** *- In West African cuisine, potassium nitrate (salt petre) is widely used as a thickening agent in soups and stews. It is also used to soften food and reduce cooking time when boiling beans and tough meat. Salt petre is also an essential ingredient in making special porridges.*

***Pharmacology*** *- Used in some toothpastes for sensitive teeth. Used in some toothpastes to relieve asthma symptoms. Used historically to treat asthma.*

***Other uses*** *– In the manufacture of gun powder. As an oxidizing agent in laboratory and industries.*

***[4]Medicinal Uses –*** *Potassium nitrate in solution is used as refrigerant as well as* ***efficient diuretic****.*

*In weak solutions, 1 to 2 drachiams in a quart of thin warm rice kanji. It is an excellent refrigerant drink in fevers with hot and dry skin, parched tongue with great thirst and scanty high coloured urine. It is also useful in early stages of small pox. Drop C acute rheumatism.*

*In colic a powder containing nitre, black pepper and sanchala salt. In equal parts is recommended to be given in doses of 10 grains in lime juice.*

*A mixture of niter 2 parts and leave juice of radish, 1 part is given in doses of 80 grains tp releave scalding and retention of urine and also scantinuous of urine.*

[4] Indian Materia Medica 91,92&93

## *MUSA PARADISIACA, Linn*

***TAXONOMICAL CLASSIFICATION:***

| | | |
|---|---|---|
| *Kingdom* | - | *Plantae* |
| *Subkingdom* | - | *Tracheobionta* |
| *Superdivision* | - | *Spermatophyta* |
| *Division* | - | *Magnoliophyta* |
| *Class* | - | *Liliopsida* |
| *Subclass* | - | *Zingiberidae* |
| *Order* | - | *Zingiberales* |
| *Family* | - | *Musaceae* |
| *Genus* | - | *Musa* |
| *Species* | - | *Paradisiaca* |

***DISTRIBUTION:***

*The plant is widely distributed throughout the tropical regions. It is native to India and Burma.*

***HABIT:***

*The plants have a large herbaceous growth habit with leaves with overlapping basal sheath often mistaken for trees, but their upright stem is actually a pseudostem that grows 6 to 7.6 metres tall, growing from a corm.*

***LEAVES:***

*The new leaves originated from the corm that grow up continuously through the centre of the pseudostem with their laminas tightly rolled in a spiral manner.*

***INFLORESCENCE:***

*One terminal inflorescence arises from each corm with peduncle extending through the centre of the pseudostem and bending down*

*when exserted, being a compound spike (BANANA HEART).*

***FRUIT:***

*The fruit has been described as a "leathery berry"*

***ACTIVE INGREDIENT:***

*Tannins, eugenol , tyramine. High tannin content in the plant and unripe fruits has antibiotic activity. Serotonin, levarterenol, and dopamine are available in the ripe fruit and peel. Other chemical constituents are alkaloids, steroidal lactones, and iron*

*Bananas are naturally slightly radioactive more so than most other fruits, because of their potassium (499mg/100gm) content and the small amounts of the isotope potassium-40 found in naturally.*

*Bananas promote an overall improvement of the functional efficiency of kidneys. Benefits to the kidneys are again due to the high potassium content, a normal intake of potassium suppresses calcium excretion in the urine and minimize the risk of kidney stone.*

*As banana is a best source of potassium,it reduces the risk of high blood pressure and also helps to maintain normal fluid and electrolyte balance in the cell.*

## *PIPER BETLE, Linn*

***VERNACULAR NAMES:***

| | | |
|---|---|---|
| *English* | *:* | *betle leaf* |
| *Gujarati* | *:* | *paan* |
| *Hindi* | *:* | *pan* |
| *Kannada* | *:* | *panu* |
| *Malay* | *:* | *se keh* |
| *Tamil* | *:* | *vettrilai* |

***[5]TAXONOMICAL CLASSIFICATION:***

| | | |
|---|---|---|
| *Kingdom* | *:* | *Plantae* |
| *Subkingdom* | *:* | *Tracheobionta* |
| *Superdivision* | *:* | *Spermatophyta* |
| *Division* | *:* | *Magnoliophyta* |
| *Class* | *:* | *Magnoliopsida* |
| *Subclass* | *:* | *Magnoliidae* |
| *Order* | *:* | *Piperales* |
| *Family* | *:* | *Piperaceae* |
| *Genus* | *:* | *Piper* |
| *Species* | *:* | *betle* |

*HABIT – The betle plant is an evergreen and perennial creeper, with glossy heart-shapedleaves and white catkin.*

*HABITAT – Mostly found in moist and hot climatic condition. In India, it is in found in Bihar, Bengal and South India.*

***Parts used:***

***Leaves*** *- Cordate, alternate ,Aromatic, dark green with entire margin, acuminate apex and unequal base with stout petiole.The leaves*

[5] *A handbook to the flora of Natal / by J. Medley Wood*

*are stimulant, antiseptic and sialogogue. Essential oil from leaves—antispasmodic, antiseptic.*

*The Ayurvedics claim that the leaves are anthelminthic, aphrodisiac, carminative and laxative. They are also known to be stomachic and tonic.*

*The Yunani regard the leaves as a styptic and a vulnerary. They prescribe it to improve the appetite and taste, to strengthen teeth and as tonic for the brain, heart and liver.*

***[6]CHEMICAL CONSTITUENTS:***

*Leaves contain protein 3.1 %, carbohydrate 6.9 %, minerals 2.3 %, and tannins 2 %. It contains calcium, phosphorus, iron, iodine and potassium is also present. Vitamin B, vitamin c and vitamin A. leaves contains bitter compounds that are about 0.7 to 2.6 %. It also contains an aromatic compound and stable oils like phenol and terpene. Besides this it contains eugenol, chavibetol and hydroxychavicol.,Allyl pyrocatecol,piper betol*

***[7]Effects of the active substance:***

*The juice of betle leaves is credited with diuretic properties. Its juice mixed with diluted milk and sweetend, slightly help in easing urination.*

*The juice of a few betle leaves, with a teaspoon of honey will serve as a good tonic.Thebetle leaf has analgesic and cooling properties*

*A mixture of onion and betle leaves juice can cure fungal infection. Eugenol in leaves prevent deadly fungus Candida albicans, anti-convulsive, analgesic, anesthetic, relieving spasms in smooth muscles.*

*Tannin Present in leaf is a astringent it is liver protective .*

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[6] *International Journal of Pharmaceutical Research & Development, Vol 4,Chandra Vikash*

[7] *International Journal of Pharmaceutical Research & Development, Vol 4,Chandra Vikash*

## *RAPHANUS SATIVUS, Linn*

***TAXANOMICAL HIERARCHY:***

| | | |
|---|---|---|
| *Kingdom* | - | *Plantae* |
| *Subkingdom* | - | *Viridaeplantae* |
| *Infrakingdom* | - | *Streptophyta* |
| *Division* | - | *Tracheophyta phytes* |
| *Subdivision* | - | *Spermatophytina* |
| *Infradivision* | - | *Angiospermae* |
| *Class* | - | *Magnoliopsida* |
| *Superorder* | - | *Rosanae* |
| *Order* | - | *Brassicales* |
| *Family* | - | *Brassicaceae* |
| *Genus* | - | *Raphanus L.* |
| *Species* | - | *Raphanus sativus L.* |

***VERNACULAR NAMES:***

| | | |
|---|---|---|
| ***English*** | *:* | *Radish, cultivated radish* |
| ***Tribal*** | *:* | *Mulwa (Chakma), Mala (Marma)* |
| ***Sanskrit*** | *:* | *Kuttoowmbi* |
| ***Telugu*** | *:* | *Darbuje* |
| ***Hindi*** | *:* | *Jamanka* |
| ***Kannada*** | *:* | *Tharbooza* |
| ***Malayalam*** | *:* | *Mandeki* |

*Greek name of the genus Raphanus means "quickly appearing" and refers to the rapid germination of these plants. The common name "radish" is derived from Latin (Radix = root). Four botanical varieties are recognised within the species, R. sativus L., namely radicula, Niger,*

*mougri and oleifera, the first two of which are grown for their tuberous roots, while oleifera is grown primarily for the oil in its seeds.*

***HABIT***

*Annual or Biennial Herb*

***MORPHOLOGICAL CHARACTERS:***

***LEAVES***

*The leaves are roughly hairy. The basal leaves are long, often pinnately lobed and coarsely toothed, but sometimes are not serrated, while the cauline leaves are simple and linear.*

***FLOWERS***

*The flowers are in long terminal racemes, usually white or lilac with purple veins.*

***FRUITS AND SEEDS***

*The fruit are narrow, indehiscent, 2.5-7.5 cm long and about 1.25 cm in diameter, with a long tapering beak. There are usually 6-12 globose seeds, yellow to chocolate-brown in colour. Seeds are separated by pith.*

***ROOT***

*The tap root is swollen, fleshy and normally white and in some may be pink to red.*

***MEDICINAL USES:***

- *LEAVES - The juice of the fresh leaves is diuretic and laxative and used treatment of Asthma.*
- *SEED - The seed is carminative, diuretic, expectorant, laxative and stomachic. It is taken internally in the treatment of , abdominal bloating, wind, acid regurgitation, diarrhoea and bronchitis.*
- *ROOT - The root is antiscorbutic, antispasmodic, astringent, cholagogue, and diuretic. It is crushed and used as a poultice for burns, bruises and smelly feet.*
- *The roots are said to be useful in urinary complaints, piles and in gastrodynia, Liver dysfunction and poor digestion*
- *The plant contains raphanin, which is antibacterial and antifungal. It inhibits the growth of Staphylococcus aureus, E. coli, streptococci, Pneumococci etc.Radish preparations are useful in liver and gall bladder troubles. The roots are said to be useful in urinary complaints, piles and in gastrodynia.*

***PHYTOCHEMICAL PROFILE:***

*Coumarins isolated from Radish root*

*Aesculetin – Anti fungal activity*

*Scopoletin – Anti spasmodic activity*

*Organic acid isolated from Radish leaves and roots*

*Para-hydroxy benzoic acid – Anti microbial activity*

*Salicylic acid – Anti fungal activity*

*Vanillic acid – Anti microbial activity*

*Phenolic compounds isolated from Radish leaves and roots*

*Cyanidin – Antiulcer activity*

*Kampherol – **Diuretic**, anti-inflammatory and anti-oxidant activities*

# சித்த மருத்துவ நோக்கு - GUNAPADAM ASPECT

## வெடியுப்பு - POTASSIUM NITRATE

**[8]சரக்கு வகை :-**

"உங்கந்தா னுப்புவகை இருபத்தைந்து"

இயற்கை உப்பு -10

செயற்கை உப்பு -15

வெடியுப்பு - ஓர் செயற்கை உப்பு ஆகும்.

**[9]வேறு பெயர்கள் :-**

- பொட்டிலுப்பு
- இணங்கன்
- படைராசன்
- பூமிகூர்மன்
- நவச்சாரமித்ரு

[10]பூநாதன், கம்பி, அணங்கன், தீச்சுடர், போட்டிலை, வேதை வளர்ப்பி

[11]புடலவணம், கருவாம்முப்பு, ஊழராவணம், அக்கினித்தீ, ஆண்மையுள்ளோன், புசங்கசத்துரு, நவச்சார மித்ரு

**[12]வைப்பு முறை:-**

ஓரடி கனத்த மட்பாண்டத்தில், உப்பு உதிர்ந்த மண்ணைக் கொட்டி, நீர்விட்டுக் கலக்கி, பிறகு குருது கட்டி, தமரிட்டு, வைக்கோல் சொருகி மேற்படி நீரை விட்டுத் தெளிவெடுத்து, அதனை காய்ச்ச உப்பாகும்.

இவ்வுப்பு 1 பங்குக்கு நீர் 4 பங்கு விட்டுக் காய்ச்சும்போது, முப்பதிற்கு 1 பங்கு புளித்த மோர், பழச்சாறு இவற்றை விட்டுக் காய்ச்சி, உப்பெடுக்கவும். இப்படி 4 அல்லது 5 முறை காய்ச்சி எடுக்க, உப்பு கம்பியாய் நிற்கும். இது வாதத்துக்கு வேர், காய், இலை, பூ என்பர்.

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[8] போகர் இரண்டாவது ஆயிரக் காப்பு செய்யுள்

[9] குணபாடம் தாது - சீவ வகுப்பு - 331

[10] வாத வைத்தியத்துக்காதி பாகம் - I பக்கம் 129

[11] போகர் நிகண்டு அட்டவணை -3

[12] குணபாடம் தாது சீவ வகுப்பு - பக்கம் 331 பதார்த்த குண விளக்கம் தாது சீவவர்கம் பக்கம் -18

**[13]சத்துரு - மித்துரு :-**

"கேளமா தாரங் கெடிசிலை கெந்தியும்
வாளடா வீரம் வளர் வெடி காரமும்
நாளுடன் லிங்கம் நல்ல கௌரியும்
சேலும நாகமுஞ் செப்ப நிமிளையே

நிமிளை காரியம் நின்ற கல்நாருடன்
குமிளை அவத்தங் கொடியநல மித்துரு
தமிழை யறிந்து தனதாய் வகையுடன்
உமிழப் படாமல் உகந்தநீ பாருமே

பார வெடியுப்புப் பணியும் நல் சத்துரு
காரியம் ரெண்டுங் கடியதோர் சூடனுஞ்
சாரச் சவுடு குளிப்பச்சை வெள்ளியுங்
கோரக் குரும்பு கூர்காந்தத் தொட்டியே

தொட்டிய செம்பு சூரசிலை கெந்தி
கட்டிய காந்தம் கடுஞ்சிங்கி ராசா
கொட்டிய காந்தங் கொடுசுரை கெந்தியும்
விட்டதீ முருகல் வேண்டுஞ் சத்துருவே."

**[14]பஞ்ச பூத கூறு:-**

பஞ்சபூத உப்பில் வெடியுப்பு தேயுவின் கூறு ஆகும்.

**[15]நாத-விந்து கூறு:-**

"வெடியுப்பு நாத சரக்கு, இதற்கு விந்து சரக்கு சவுக்காரம் ஆகும்
புளி நாத சரக்கு, இதற்கு விந்து சரக்கு வெடியுப்பு ஆகும்.
[16]வெடியுப்பு ஆண் சரக்கு, இதற்கு பெண் சரக்கு படிகாரம்"

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[13] மச்சமுனி நாயனார் - பக்கம் 54, 55. பதார்த்த குணவிளக்கம் தாதுசீவ (வர்க்கம்) பக்கம் 294

[14] குணபாடம் தாது சீவவகுப்பு - பக்கம் 333, பலராமையர் வாதவைத்தியத்துக்காதி - பக்கம் 10, மச்சமுனி சரக்கு வைப்பு திருமந்திரம் - பக்கம் 87

[15] பாலராமைய்யர் வாத வைத்தியத்துக்காதி பக்கம் - 29,

[16] பதார்த்த குண விளக்கம் - 18

**[17]சுத்தி முறைகள்**

- வெடியுப்பு ஒரு பங்கு, கடல் நீர் அல்லது கிணற்று நீர் இரண்டு பங்கு, வெடியுப்பைக் கல்வத்திலிட்டு நுண்மையாகப் பொடித்து மேற்படி நீரில் கரைத்துக் கொஞ்ச நேரம் வைத்தால், மேலே தெளிவிருக்கும். அந்தத் தெளிவையிறுத்து, இரும்புச் சட்டியில் விட்டுக் காய்ச்ச, உப்பாகும். அந்த உப்பை முன்போற் பொடித்து மீண்டும் இரண்டு பங்கு நீரில் கரைத்துக் காய்ச்சி உப்பாக்கி முன்போல் இரண்டு பங்கு நீரில் கரைத்துக் காய்ச்சி எடுத்துக் கொள்ள, வெடியுப்பானது சுத்தியாயிருக்கும்.
- மேற்கண்ட பாகப்படியே வாழைக் கிழங்குச் சாற்றில் மூன்று தடவை செய்தால் திறமான சுத்தியாகும். ஏழு தடவை செய்தால் திறமான சுத்தியாவதுடன் வெடியுப்புக் கட்டாகும்.
- இந்த உப்பு ஒரு பங்கிற்கு நான்கு பங்கு தண்ணீர் விட்டு அடுப்பேற்றிச் சிறு தீயால் எரித்துக் கொதி கிளம்பும் போது மேற்படியான ஒரு வீசை (1400 கிராம்) உப்புக்கு நான்கு கோழி முட்டை வெண் கருவைச் சேர்க்க வேண்டும். மேலெ அழுக்கு திரளும். அதனை அகப்பையால் வழித்து நீக்கி, உறையும் பதத்தில் மறுசட்டியில் சீலை கட்டி அதில் வடித்துக் காற்றில்லா விடத்தில் வைத்து மறுநாள் எஞ்சிய நீரை வடித்துவிட்டு, சூரியவொளியில் உப்பை உலர்த்தவும். இவ்வாறு ஏழுமுறை செய்யச் சுத்தியாம். முட்டை வெண் கருவிற்குப் பதில் பாலுக்கு புரை இடுவது போல். எலுமிச்சம் பழச்சாற்றையாவது, புளித்த மோரையாவது சேர்த்து அழுக்கை நீக்கலாம்.

## *Organoleptic characters:*

| | | |
|---|---|---|
| **[18]TASTE** (சுவை) | - | கசப்பு(Bitter), விறுவிறுப்பு |
| **POTENCY**(வீரியம்) | - | வெப்பம் (Hot) |
| **BIO TRANSFORMATION** (விபாகம்) | - | கசப்பு(Bitter) |
| **[19]DOSAGE** (அளவு) | - | 5 - 10 குன்றியெடை |

**[20]DOSAGE (அளவு) :**

5 - 15 கிரேன் ஜலத்தில் கொடுக்கலாம்.

20 - 30 கிரேன் வியர்விக்க கொடுக்கலாம்.

1 - 8 கிராம் அதிக ஜலத்தில் கரைத்து இதன் வேகத்தை குறைத்து பிரமேகம், கீல்வாதம் இவைகளுக்கு கொடுக்கலாம்.

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[17] குணபாடம் தாது சீவ வகுப்பு - பக்கம் 332, அனுபோக வைத்திய நவநீதம் - பக்கம் 83, சரக்கு சுத்தி செய்முறைகள் - பக்கம் 87

[18] பிராண ரக்ஷாமிர்த சிந்து

[19] குணபாடம் தாதுசீவ வகுப்பு - பக்கம் 333

[20] பிராண ரக்ஷாமிர்த சிந்து

[21]**ACTION (செய்கை)**

Refrigerent (குளிர்ச்சி உண்டாக்கி)

Diaphoretic (வியர்வை பெருக்கி)

Diuretic (சிறுநீர்பெருக்கி)

[22]**GENERAL CHARACTERS (பொது குணம்)**

"மல்லாரு மட்டகுணம் மாதருத ரக்கட்டி
கல்லா மதைப்புநீர்க் கட்டருக - லெல்லாமே
கம்பிகம்பி யென்றுங் கருவுண்டா மங்கிநின்ற
கம்பிகம்பி யென்றுரைக்குங் கால்.

சூதக வாயுவொடு சோணிதத்தின் வாதமும் போம்
வாதவலி குன்மமிவை மாறுங்காண் - மீதாங்
கொடிய வயிறிழியுங் கோழைகப மேகும்
வெடியுப்புத் தன்னை விளம்பு."

எண்வித குன்மம், கருப்பாசயக் கட்டி, சோபை, மூத்திரக்கிரீச்சரம், நீர்சுருக்கு, சூதிகாவாதம், வாத சோணிதம், சாமானியவாத பித்த கப குன்மங்கள், பெருவயிறு,ஈளை, கபதோடம் ஒழியும். பேரிளம் பெண், பருவங் கடந்த மாதர்கட்கும் கருப்பம் உண்டாகும்.

**[23]மருத்துவ பயன்கள் :**

- பொட்டிலுப்பு 4 வராகன், நவாச்சாரம் 4 வராகன்,¾ ஆழாக்கு நீரில் கரைத்து சீலையில் நனைத்து உலர உலர நெற்றியிலிட நினைவு தடுமாற்றம், தலைவலி இவைகளுடன் கூடிய சுரத்திற்கு குணத்தை கொடுக்கும்.
- பொட்டிலுப்பு 2 வராகனை 1 சேர் கஞ்சியிலிட்டு சுவைக்காக தேன் அல்லது கற்கண்டு சேர்த்து அருந்த நாவறட்சி, தாகம், நீர்கடுப்பு, தோல் வறட்சி, அம்மையால் காணும் சுரம், நீர்க்கோவையுடன் கூடிய சுரம், மேல்நோக்கு கீழ்நோக்கு ஆகிய இரத்த பித்த நோயிலும் வழங்கலாம்.
- ஆரம்ப தொண்டைப்புண், நெஞ்சு விரணம் இவைகளுக்குச் சிறிது பொட்டிலுப்பை வாயிலிட்டுச் சுவைக்க குணத்தை தரும்.

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[21] குணபாடம் தாதுசீவ வகுப்பு - பக்கம் 332

[22] பதார்த்த குண விளக்கம் - பக்கம் 407, குணபாடம் தாதுசீவ வகுப்பு - பக்கம் 333

[23] குணபாடம் தாதுசீவ வகுப்பு - பக்கம் 333

- ஊறுங் காகிதங்களைப் பொட்டிலுப்பு நீரில் ஊற வைத்த உலர்த்திச் சுருட்டிக் கொளுத்திப் புகைபிடிக்கச் சுவாசகாசம், இருமல் தணியும்.
- 2 குன்றியெடைபொட்டிலுப்பை ஒரு அவுன்ஸ் நீரில் கலந்து கண்வலிக்குச் கிலேதமாகவும் உபயோகிக்கலாம்.
- 1 பலம் வெடியுப்பை 2 ஆழாக்கு நீரிலிட்டுக் கலந்து, அதில் சீலையை நனைத்து மூட்டு வீக்கம், மூட்டுவலி இவைகளுக்கு மேலே போட குணமாகும்.
- பொட்டிலுப்பு திராவகம் (Acidum nitricum) தக்க அளவு நீரில் கலந்து கொடுக்க சிறுநீரை அதிகப்படுத்தும். பழஞ்சுரத்திற்குப் பின் காணும் பலக்குறைவு நீங்கும்.
- துளிக்கணக்கில் நீரில் கலந்து குழந்தைகட்குக் கொடுத்து வரக் கல்லீரல், மண்ணீரல் வீக்கம் குணமாகும்.
- வெடியுப்புச் செயநீர் - தாளகம் முதலிய பாஷாணங்களும் உபரசங்களும் நீறும்.
- வெடியுப்புச் சுண்ணம் -1 குன்றி முள்ளங்கிச் சாறு, இளநீர் அல்லது சிறுபீளைச் சாற்றில் கொடுக்க நீர்கட்டு, நீரடைப்பு, நீர் எரிச்சல் நீங்கும்.

**நஞ்சு குறிகுணம் :**

கட்டியாய் உட்கொண்டால் எரிச்சலை உண்டுபண்ணும். அதிக அளவில் பயன்படுத்த பிராணபயம் நேரிடும்.

## வெடியுப்பு சேரும் கல்லடைப்பிற்கான பிற மருந்துகள்

- **[24]சார பற்பம்**

அளவு : 2 - 3 குன்றியெடை

அனுபானம் : சீரகக் குடிநீர்

தீரும் நோய் : கல்லடைப்பு, சதையடைப்பு குடல்வாதம், கற்றாழை நாற்றம்

- **[25]சாரலவண பற்பம்**

அளவு : 1 - 1½ குன்றியெடை

அனுபானம் : இளநீர், சீரகக்கியாழம், அன்ன கொதி சலம்

தீரும் நோய் : நீர் அடைப்பு, நீர்கட்டு, பக்கசூலை

- **[26]சதுர்முக பற்பம்**

அளவு : 1 - 2 குன்றியெடை

தீரும் நோய் : கல்லடைப்பு, நீரடைப்பு, சதையடைப்பு, பிரமேகம்

- **[27]ஆறாதார பற்பம்**

அளவு : குன்றியெடை

அனுபானம் : இளநீர், வெங்காய சாறு, நீரை பெருக்கும் குடிநீர்

தீரும் நோய் : கல்லடைப்பு, நீரடைப்பு, சதையடைப்பு, நீர் எரிச்சல்

- **[28]யூதக்கல் பற்பம்**

அளவு : 1-2 குன்றியெடை

அனுபானம் : நெருஞ்சி முட்தூள், காசினி விதைத்தூள் வகைக்கு 16 குன்றியெடை, தேன் 1 ½ வராகனெடை

தீரும் நோய் : கல்லடைப்பு, சதையடைப்பு, நீர்ப்பை கல்லடைப்பு, நாட்பட்ட பிரமேக நோய்

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[24] பதார்த்த குண விளக்கம் தாது சீவ வர்க்கம் பக்கம் 139

[25] பதார்த்த குண விளக்கம் தாது சீவ வர்க்கம் பக்கம் 139

[26] பதார்த்த குண விளக்கம் தாது சீவ வகுப்பு பக்கம் 174

[27] கண்ணுசாமி பரம்பரை வைத்தியம் பக்கம் 397

[28] அனுபோக வைத்திய நவநீதம் பாகம் - III பக்கம் 169

- **[29]காளமேக நாராயண செந்தூரம்**

அளவு : ½ பனவெடை

அனுபானம் : முருங்கைப்பட்டை சுரசம்

தீரும் நோய் : கல்லடைப்பு, நீரடைப்பு, சதையடைப்பு

- **[30]எ.ஃ.கு செந்தூரம்**

அளவு : பனவெடை

அனுபானம் : நெய், தேன்

தீரும் நோய் : கல்லடைப்பு, சதையடைப்பு, நீர்க்கட்டு, நீரடைப்பு

- **[31]வெடியுப்புச் சுண்ணம்**

அளவு : துவரம் பருப்பளவு

அனுபானம் : இளநீர், நீரை பெருக்கும் குடிநீர்

தீரும் நோய் : கல்லடைப்பு, சதையடைப்பு, நீர்க்கட்டு

- **[32]வெடியுப்புச் சுண்ணம்**

அளவு : குன்றியெடை

அனுபானம் : இளநீர்

தீரும் நோய் : நீரடைப்பு, கல்லடைப்பு

- **[33]ஜலமஞ்சரி**

அளவு : ¼ முதல் ½ வராகனெடை

அனுபானம் : இளநீர், முள்ளங்கிச்சாறு, சோம்புத்தீநீர், காசினித்தீநீர்

தீரும் நோய் : கல்லடைப்பு, சதையடைப்பு, நீர்க்கட்டு, நீரருகல்

- **[34]வெடியுப்பு செய்நீர்**

அளவு : 4 முதல் 10 துளிகள்

துணை மருந்து : எலுமிச்சம் பழச்சாறு, நெருஞ்சிவேர்க் குடிநீர்,இளநீர், வெள்ளரிக்காயை அனலில் வாட்டிப் பிழிந்த சாறு

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[29] ஆத்ம ரட்சாமிர்தமென்னும் வைத்திய சாரசங்கிரகம் பக்கம் 496

[30] கண்ணுசாமியம் என்னும் பரம்பரை வைத்திய சேகரம்பக்கம் 141

[31] கண்ணுசாமி பரம்பரை வைத்தியம் பக்கம் 400

[32] கண்ணுசாமி என்னும் வைத்திய சேகரம் பக்கம் 86

[33] அனுபோக வைத்திய நவநீதம் பாகம் - VII பக்கம் 98

[34] அனுபோக வைத்திய நவநீதம் பாகம் III பக்கம் 78

தீரும் நோய் : நீர் அருகல், நீரி எரிக்கல், நீர்க்கட்டு, கல்லடைப்பு, சதையடைப்பு

- **[35]நவச்சாரக்கட்டு**

அளவு : ¼ வராகனெடை

அனுபானம் : முள்ளங்கிக் கிழங்குச்சாறு -2பலம் தேன் -1பலம் இரண்டையும் கலந்து பயன்படுத்தவும்

தீரும் நோய் : நீர் அருகல், நீரடைப்பு, கல்லடைப்பு, சதையடைப்பு

- **[36]வெடியுப்புக்கட்டு**

அளவு : 2 முதல் 4 குன்றியெடை

அனுபானம் : நெருஞ்சி வேர் குடிநீர், யானை நெருஞ்சியைக் கலக்கி தண்ணிரில் எடுத்த கோழை, முள்ளங்கிச்சாறு வெள்ளாட்டுப்பால்

தீரும் நோய் : நீரடைப்பு, கல்லடைப்பு, சதையடைப்பு,வயிற்றுவலி, வாயு

[35] அனுபோக வைத்திய நவநீதம் பாகம் III பக்கம் 57

[36] அனுபோக வைத்திய நவநீதம் பாகம் III பக்கம் 71

# [37]வாழை

## MUSA PARADISIACA, Linn

**வேறு பெயர் :**

- அம்பணம்
- அரம்பை
- ஓசை
- கதலி
- கவர்
- சேகிலி
- திரணபதி

[38]வாழையுடப் பேர்தனையே வழுதகக்கேளு
மகத்தான ரம்பா வாங்கதலி மோசா
வீழையகம் விரிந்த புஷ்ப மற்பலாவா
மிரையான காஷ்டிவா வாயு தானீ
தாழையாஞ் சுகுமாரந் தீரண பந்திரந்
துரிதமாம் யஸ்தி விஷர்ணி காலாகும்
நாழையாம் ரத்த பித்தனா சனியுமாகும்
நாடியதோர் வாழையுடப் பேருமாமே"

இது இந்தியாவின் எல்லாப் பாகங்களிலும் வைத்துப் பயிர்செய்யப்படுகிறது. இதில் பல வகையுண்டு. அகத்தியர் குணபாடத்தில் எண் வகை வாழைப் பழத்தின் குணம் கூறப்பட்டிருக்கின்றது.

**பயன்படும் உறுப்புகள் :** இலை, பூ, பிஞ்சு, காய், பழம், பட்டை, கட்டை, தண்டு, நீர்

**நீர், கட்டை, தண்டு**

### Organoleptic Characters

| | | |
|---|---|---|
| Taste (சுவை) | - | துவர்ப்பு |
| Potency (தன்மை) | - | வெப்பம் |
| Bio transformation (பிரிவு) | - | இனிப்பு |

**Action (செய்கை)**

| | | |
|---|---|---|
| பூ, பிஞ்சு, காய் | Astringent | (துவர்ப்பி) |
| நீர் | Styptic | (குருதிப் போக்கடக்கி) |
| கட்டை, தண்டு | Antipitha | (பித்தமடக்கி) |
| | Diuretic | (சிறுநீர் பெருக்கி) |

[37] குணபாடம் மூலிகை வகுப்பு 810

[38] போகர் நிகண்டு 1200

| | | |
|---|---|---|
| இலை, பட்டை | Refrigerant | (குளிர்ச்சியுண்டாக்கி) |
| பழம் | Demulcent | (உள்ளழலாற்றி) |
| | Laxative | (மலமிளக்கி) |
| | nutritive | (உடலுரமாக்கி) |

**வாழைக் கிழங்கு :-**

- கிழங்கை இடித்துப் பிழிந்த இரசத்திற்கு மூத்திரத்தைப் பெருக்கும் செய்கை உள்ளது.
- இதில் வெடியுப்பின் சத்து சேர்ந்திருப்பதால் நீர்க்கட்டு, நீர் எரிவு, இரத்தக்கிரிச்சரம் இவைகளைப் போக்க பயன்படுத்தலாம்.
- கிழங்கின் இரசத்தினால் **வெடியுப்பு மேலான சுத்தியாகும்**.

# [39]வெற்றிலை

## PIPER BETLE, Linn

**வேறு பெயர் :**

- தாம்பூலம்
- வெள்ளிலை
- தாம்பூலவல்லி
- திரையல்
- நாகவல்லி
- மெல்லிலை
- மெல்லடகு

[40]வெத்திலையின் பேர்தனையே விளம்பக் கேளு
வேண்டியதோர் தாம்பூல மாதாவாகும்.
சித்திலையின் சாதக லட்சுமி யாகும்
தாம்பூலக் கண்ணி நல நாகவல்லி
ஒத்திரைவோம் புலக்கன்னியாகும்
உறுபல்லுக்கழகி தான் தேக ரக்ஷகியாம்
நத்தலை நாகத்தை சூரணமாக்கி
நலங்கியதோர் வெற்றிலையி நாமமாமே.

இது இந்தியாவில் வெப்ப பாகத்திலும், சதுப்புள்ள இடங்களிலும் பயிராக்கப்படும். மரமேறுங்கொடி. இது இலையின் பொருட்டே பயிரிடப்படுகிறது.

இது இலையின் நிறத்தாலும், மணத்தாலும், கார்ப்புச் சுவையாலும் வகைப்படும். கருமையும், காரமும் மிகுந்தது "கம்மாறு வெற்றிலை". கருப்பூர மணமும் சிறுகாரமுமுடையது "கருப்பூர வெற்றிலை".

**பயன்படும் உறுப்பு :** இலை

| | |
|---|---|
| Taste (சுவை) | விறுவிறுப்பு |
| Potency (தன்மை) | வெப்பம் |
| Bio-transformation (பிரிவு) | கார்ப்பு |

[39] குணபாடம் மூலிகை வகுப்பு 847
[40] போகர் நிகண்டு 1200

**Action (செய்கை) :**

| | |
|---|---|
| Stimulant | (வெப்பமுண்டாக்கி) |
| Carminative | (அகட்டுவாய்வகற்றி) |
| Astringent | (துவர்ப்பி) |
| Aphrodisiac | (காமம் பெருக்கி) |
| Antiseptic | (அழுகலகற்றி) |
| Febrifuge | (வெப்பகற்றி) |
| Stomachic | (பசித்தீத்தூண்டி) |
| Galactagogue | (பாற்பெருக்கி) |
| Sialogogue | (உமிழ்நீர்ப்பெருக்கி) |

**குணம் :**

வெற்றிலையின் இரசத்தைப் பருகில், ஐயம், சயித்தியம், முப்பிணி இவைகள் ஒழியும்.

ஐயம் அறுங்காண் அதன்சாரங் கொண்டக்காற்
பையச் சயித்தியம்போம் பைந்தொடியே - மெய்யின்
கடியின் குணம் போகுங் காரவெற்றி லைக்குப்
படியுமுத் தோடமிதைப் பார்.

**கம்மாறு வெற்றிலை**

இதற்கு நீரேற்றம், தலைபாரம், முப்பிணி, மாந்தம், குரற் கம்மல், வயிற்று வலி, வயிற்றுப்பிசம் ஆகியவைபோம்.

எட்டிலொன்று கிட்டினீ ரேற்றஞ் சிரோபார
மாட்டி விடுசன்னி மாந்தமொடு - நாட்டிற்
பரியகுரற் கம்மல்வலி பண்டியுப்பி சம்போ
மரியகம் மாறு வெற்றி லை.

**[41]மருத்துவப் பயன்பாடு :**

- தொண்டையடைப்பு, குரற்கம்மலில் வெற்றிலையையும், சாமிபய பதங்கத்தையும மென்று சுவைக்கும்படி செய்யலாம்.
- பாற்சுரக்கவும், பால் கட்டி உண்டாகும் முலை வீக்கத்தைக் கரைக்க வெற்றிலையைத் தணலில் வாட்டி அடுக்கடுக்காக வைத்துக் கட்டலாம்.

[41] குணபாடம் மூலிகை வகுப்பு 848

- தலைப் பளுவுக்கு மூக்கிலும், காது குத்தலுக்குக் காதிலும், வெற்றிலைச் சாற்றில் 2 -3 துளி விடலாம்.
- வெற்றிலையை எண்ணெயில் நனைத்து, விளக்கில் வாட்டி மார்பின் மேல் போட இருமல், மூச்சுமூட்டல், கடின சுவாசம், குழந்தைகளுக்குண்டாகும் இருமல் விலகும். இவைகட்கே வெற்றிலைச் சாற்றுடன் சுண்ணாம்புக் கூட்டி தொண்டைக் குழியில் தடவலாம்.
- வெற்றிலைச் சாறுடன் இஞ்சிச் சாறும் சேர்த்து நுரையீரல் சம்பந்தமான நோயில் வழங்கலாம்.
- தீப்பட்ட புண்ணின் மீது வெற்றிலையை வைத்துக் கட்டலாம்.
- இளம் வெற்றிலைக் கொடி வேரும், மிளகுஞ் சேர்த்து சாப்பிட்டு மலட்டை உண்டாக்கும்.
- வேரைச் சுவைத்து வர பாடகர்களின் தொண்டை ஒலி பெருகும்.
- சிறுபிள்ளைகளுக்குண்டாகும் வயிற்றுப் பொருமல், மலச்சிக்கல் இவைகளை போக்க வெற்றிலைக் காம்பை ஆமணக்கு நெய்யில் நனைத்து கீழ்வாயில் வைக்கலாம்.
- வெற்றிலைச் சாற்றில் கொஞ்சம் கோரோசனஞ் சேர்த்து புகட்டினால் கோழைக் கட்டு, இருமல், மூச்சுத் திணறல் குணமாகும்.
- 2 - 3 வெற்றிலையுடன் 4 - 5 மிளகு சேர்த்துக் குடிநீரிட்டுப் புகட்ட சிறுவர்களுக்குண்டாகும் செரியாமை விலகும்.

# [42]முள்ளங்கி

## Raphanus sativus, Linn.

### வேறு பெயர் : முள்ளங்கி, மூலபம்

இ/து இந்தியாவின் எல்லாவிடங்களிலும் பயிரிடப்பட்டு வருகிறது.

இதில் வெள்ளை, சிவப்பு, மஞ்சள் என மூன்று வகை உண்டு. ஆனால் பண்பு ஒன்றேயாகும்.

**பயன்படும் உறுப்பு :** இலை, கிழங்கு, விதை

### Organoleptic Characters

| | இலை - கிழங்கு | விதை |
|---|---|---|
| **Taste (சுவை)** | கார்ப்பு | இனிப்பு |
| **Potency (தன்மை)** | தட்பம் | தட்பம் |
| **Bio-Transformation (பிரிவு)** | கார்ப்பு | இனிப்பு |

**Action (செய்கை) :**

| | |
|---|---|
| Aphrodisiac | ஆண்மைப் பெருக்கி |
| Diuretic | சிறுநீர்ப்பெருக்கி |
| Laxative | மலமிளக்கி |
| Stimulant | வெப்பமுண்டாக்கி |
| Stomachic | பசித்தீத்தூண்டி |

**கிழங்கு :**

இதனால் "வளி நோய்" கரப்பான், வயிற்றெரிச்சல், குத்தல், குடல் பருமன், இருமல், ஐய நோய், தலைவலி, நீரேற்றம், பல்நோய், பல் சிலந்தி, குன்மம், இரைப்பு, மூலக்கடுப்பு இவை போம்.

வாதங் கரப்பான் வயிற்றெரிவு சூலைகுடல்
வாதங்கா சமையம் வன்தலைநோய் - மோதுநீர்க்
கோவைபன்னோய் பல்சிலந்தி குன்மமிரைப் புக்கடுப்புஞ்
சாவுமுள்ளங் கிக்கந்தத் தால்.

**வழக்கு முறை :**

முள்ளங்கி நட்டு இரண்டு மூன்று இலைகள் வந்த உடன், அவ்விலைகளில் ஒரு பிடி எடுத்து, 2-4 கிராம் சோற்றுப்புச் சேர்த்து, காலை -

[42] குணபாடம் மூலிகை வகுப்பு 777

மாலை இரு வேளையும் சாப்பிட்டு வர, வெள்ளையினால் உண்டாகும் நீரடைப்பு நீங்கும்,வெளிக்குப்போம்.

கிழங்கை நசுக்கிச் சாறு பிழிந்து 34-100 கிராம் வரையிலும் குடித்து வர சிறுநீரை நன்றாய்ப் போக்கும்.

கிழங்கைச் சமைத்துண்பது நாட்டு வழக்கம். சிலர் பச்சையாகத் தின்பதும் உண்டு. சுவையின்மையை நீக்கிப் பசியை உண்டு பண்ணும். உணவைச் செரிப்பிக்கும்.

விதையைக் குடிநீரிட்டுக் குடிக்க, மேற்கூறிய பண்புகளைத் தரும்.

# SIDDHA ASPECTS

## கல்லடைப்பு

**[43]வேறு பெயர்** - அச்மரி நோய்

அச்சமரி நோய்

**நோய் இயல் :-**

சிறுநீர்கழிக்குங்கால் அஃது இறங்கிக் கொண்டிருக்கும் போதே

- திடீரென நீரடைத்தல், குறிமுனை நோதல்
- நீர்புழை எரிதல்
- இடுப்பின் பின்புறத்தும், முதுகுத் தண்டின் பக்கத்தும் நோதல்
- மணலையொத்த சிறுகற்கள் கலந்திருத்தல்.

ஆகிய இயல்புகளையுடையதாகும்.

**[44]நோய் வரும் வழி :-**

கலங்கினதோர் தண்ணீர்தான் குடித்த பேர்க்குக்
கல்லெலும்பு மயிர்மண்தான் கலந்தன்னத்தில்
அலங்கினதோ ரன்னங்களருந்தலாலும்
அழுகலோடு மூத்தபண்ட மருந்தலாலும்
மலங்கினதோர் மாப்பண்ட மருந்தலாலும்
மந்தத்தில் வாய்வான பதார்த்தன்னை
துலங்கினதோர் ருசி தன்னிற் சுவைத்தலாலும்
சுருக்காய்க் **கல்லடைப்பு** வந்து தோன்றுந்தானே

**இதனால் கல்லடைப்பு**

- சுனைநீர், பன்னாட்கள் தேங்கிய நீர், சுருகு ஊறிய நீர் அசுத்தமான நீரை பருகுவதாலும்
- அழுகல், ஊசிய பண்டம், மாப்பண்டம், ஊசிய பண்டம் வளி, அழல் குற்றத்தை மிகுதிப்படுத்தும் உணவு உண்பதாலும்
- மண், கல், எலும்பு கலந்த அன்னத்தை உண்பதாலும், அதிக புளிப்பான தயிர் அருந்துவதாலும்
- விந்துவானது கட்டுப்படுவதாலும் வரும் என்று கூறப்பட்டுள்ளது.

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[43] சித்த மருத்துவம் - பொது 461

[44] யூகி சிந்தாமணி (727)

[45]"தெளிந்ததோர் கல்லடைப்பு உற்பத்தி கேளாய்
சிறிது நாட்டொடங்கியே மேகந்தன்னால்
தளிந்ததோர் சலப்பையி லுதிரந் தோய்ந்து
சந்தசத்தாகவே பருத்துக் கொள்ளும்
வளிந்ததோர் வாத பித்த கோபித்தக்கால்
வந்து பெருங்கல்லாய் நீர் வழியடைத்து
நளிந்ததோர் நாலுவிதக் கல்லடைப்பு
நண்பான வரலாறு நாட்டக்கேளே"

[46]கனலது மீறும் பாக்கு வெற்றிலையும்
கற்சுண்ண மிவையனுபவித்தாற்
புனலும் வேறாகுந் தனுவெனுங் கோசம்
பொரியு முண்டாக்கும் நீர் கடுக்கும்
புதுமையாய்ச் சுக்கான் கல்கொண்டடைக்கும்

பாக்கு வெற்றிலையோடு கல் சுண்ணம், அதிகமாக சேர்த்துண்டால் சுண்ணாம்பு கற்கள் நீர்த்தரையை அடைத்து விடும் என்று கூறியுள்ளார்.

**நோய் எண் :-**

குற்ற அளவாய் நான்கு

- வளி கல்லடைப்பு
- அழல் கல்லடைப்பு
- ஐய கல்லடைப்பு
- முக்குற்ற கல்லடைப்பு

**தீரும் தீராதவை :-**

தனிக்குற்றத்தால் வருவன தீரும்
முக்குற்றத்தால் உண்டாவது தீராது.

**பொது குறிகுணங்கள் :-**

- அடிக்கடி சிறுநீரிழியும், முற்றும் வெளியாகாமல் சிறுநீர் இறங்கி கொண்டிருக்கும் போதே திடீரென அடைக்கும்.
- எருவாயின் மேற்புறம் வலியுண்டாகும்.

[45] யூகி சிந்தாமணி (725)
[46] புலதத்தியம் கற்பம் - 300

- கல் கரடு முரடாயேனும், கூர்மையாயேனுமிருப்பின் கீழ் வயிற்றிலும், நீர்புழையிலும் தாங்க முடியாத எரிச்சலையும், வலியையும் தந்து குருதியை வெளியாக்கும்.

**குற்ற முதலிய வேறுபாடுகள் :-**

உணவு, நீர் முதலியவைகளால் தீக்குற்றம் மிகுந்து உடல் நீரைச் சுண்டச் செய்து, சிறுநீர் வற்றி, நீரின் உப்பை உறையச் செய்து, கீழ்நோக்குக்கால் வன்மையிழந்தால், உப்பை வெளியாக்காது தங்கச் செய்வதோடு இந்நோயைப் பிறப்பிக்கும்.

**நீர்குறி :-**

தெளியவைக்கின் சிறுமணல் போலும், சிறுகற்கள் போலும் காணப்படும்.

## *MODERN ASPECT OF THE DISAESE*

## *UROLITHIASIS*

***ETYMOLOGY:***

***The term Uro came from Greek word " ouron" means urine and lithos means stone***

***Renal calculus came from Latin "Ren – kidney", "calculus – pebble"***

*Renal calculus is a stone-like aggregation of urinary salts bound together by a colloid matrix or organic materials. It consists of a nucleus around which concentric layers of urinary salts are deposited.*

***AETIOLOGY:***

- *Hyper excretion of relatively insoluble urinary constituents.*
- *Physiological changes in urine such as Urinary Ph.*
- *Altered urinary crystalloids and colloids.*
- *Decreased urinary output of citrate.*
- *Vitamin A deficiency.*
- *Urinary infection.*
- *Urinary stasis.*
- *Hyperparathyroidism.*
- *Prolonged immobilization.*
- *Nidus of stone formation.*

*Occurance –More in male than female earlier but now the ratio is almost same as per WHO.*

***PREDISPOSING FACTORS AND CONDITIONS:***

- *Environmental and dietary factors.*
    - *Low urine volumes.*
    - *High ambient temperatures.*

- *Low fluid intake.*
- *Diet.*
- *High protein intake.*
- *High Sodium.*
- *Low calcium.*
- *High sodium excretion.*
- *High oxalate excretion.*
- *Low citrate excretion.*

▪ *Other medical conditions*

- *Hypercalcemia of any cause*
- *Ileal disease or resection (leading to increased oxalate absorption and urinary excretion)*
- *Renal tubular acidosis type.*

▪ *Congenital and inherited conditions*

- *Familial hypercalciuria*
- *Medullary sponge kidney*
- *Cystinuria*
- *Renal tubular acidosis type I*

***TYPES OF REAEL CALCULI:***

*Basically the renal stones can be divided into two major groups*

▪ *PRIMARY STONES*

*They appear in apparently healthy urinary tract without any antecedent inflammation.*

- *Calcium oxalate*
- *Uric acid calculi*
- *Cystine calculi*
- *Xanthine calculi*

- *Indigo calculi*

- *SECONDARY STONES*

  *They are usually formed as the result of inflammation.*

  - *Triple phosphate calculus or infectious stones, triple phosphate stones.*
  - *Mixed stones*

- *DRUG INDUCED CALCULI*
  - *Crixivan (Indinavix) stones – Critical to differentiate these stones from uric acid syones.*
  - *Triamterene stones – Direct crystallization by seeding calcium oxalate stones.*

**EFFECTS OF STONE:**

*The size and position of the stone usually govern the development of secondary pathologic changes in the urinary tract.*

- *SAME KIDNEY*
  - *Obstruction.*
  - *Infection*
  - *The epithelium of the pelvis and calyces in relation to the stone gradually loses lustre, becomes rough and thickened.*
  - *Metaplasia*
- *OPPOSITE KIDNEY*
  - *Compensatory hypertrophy*
  - *Stone formation may be bilateral*
  - *Infection of the opposite kidney*
  - *Calculus anuria*

***CLINICAL FEATURES:***

- *SYMPTOMS*
    - *Quiescent calculus*
    - *Pain*
        - *Fixed renal pain*
        - *Ureteric colic*
        - *Referred pain*
    - *Hydronephrosis (a lump in the loin and a dull ache)*
    - *Haematuria*
    - *Pyuria*
- *PHYSICAL SIGNS*
    - *Tenderness at the 'renal angle' posteriorly.*
    - *Muscle rigidity over the kidney*
    - *Swelling in the flank when there is hydronephrosis or pyonephrosis associated with renal calculus.*
    - *Abdominal distension and diminished peristalsis may accompany ureteric colic.*

***SPECIAL INVESTIGATIONS:***

- *Blood examination*
- *Urinalysis*
- *Radiography*
    - *Straight X-ray*
    - *Excretory urogram*
- *Ultrasonography*
- *Computed tomography*
- *Renal Scan*
- *Cystoscopy*
- *stone analysis*

***RECURRENCE:***

*Recurrence may be classified into two varieties*

- *False recurrence*
- *True recurrence*

***PREVENTION:***

***General measures.***

*The general measures or advises which should be given to the patient regardless of the type of stone are:*

- *Fluid intake should he high at all times*
- *Avoidance of milk, cheese and great deal of calcium*
- *Alkalies should be prohibited or used in lesser quantities.*
- *Vitamin D should be stopped or used in very low quantity.*
- *Patients with hyperuricemia should avoid red meats, offal and fish.*
- *Eggs, meat and fish are high in sulphur containing proteins and should be restricted in patients with cystinuria.*

*The following investigations are appropriate in bilateral and recurrent stone formers:*

- *Serum calcium, measured fasting on three occasions to exclude hyperparathyroidism.*
- *Serum uric acid*
- *Urinary urate, calcium and phosphate in a 24 hour collection. The urine should also be screened for cystine.*
- *Analysis of any stone passed.*

***Specific measures.***

- *Calcium stone disease*
  - *Non-idiopathic Calcium stone disease*
  - *Idiopathic Calcium stone disease*
    - *Low urinary volume, hypercalciuria, hyperoxaluria, hyperuricosuria .and hypocitraturia and low urinary magnesium.*
    - *Fluid intake - · A low urinary volume will increase the risk of crystal formation.*
    - *Diet*
      - *Western diet with increased intake of animal protein and carbohydrate.*
      - *Dietary intake of calcium should also be restricted.*
      - *A mega dose of vitamin C should be avoided.*
  - *Infection stones*
    - *Infection stones consist of magnesium ammonium phosphate (Struvite) with varying admixtures of calcium phosphate (apatite).*
    - *In general, Struvite stones may partially dissolve in the presence of sterile urine, so long term low-dose treatment with antibiotics is appropriate even when urine culture is initially sterile.*
  - *Oxalate stones*
    - *Foods high in oxalate should be eliminated from the diet. These are strawberrys, plums, spinach, asparagus etc.*
    - *Pyridoxine in large doses may be helpful.*

- *Thiazides are useful agents which decrease both urinary calcium and oxalate.*

- *Uric acid calculi*
  - *A low-purine diet should be prescribed for the uric acid stone former.*
- *Cystine calculi*
  - *Sulphur containing proteins such as meat, fish and eggs should be restricted.*
  - *Intake of fluids must be increased to dilute cystine in the urine.*

## *LATERAL RESEARCH WORK*

### *Musa paradisiacal, Linn*

### *[47]Diuretic effect of methanolic extract of Musa paradisiaca Root stock*

*Methanolic extracts of root stocks of Musa paradisiaca L (MEMP) was evaluated for its diuretic activity using modified method of Rao. The extracts showed increase in total urine volume and electrolytes excretion (sodium Na+, potassium K+ and chloride Cl). the metanol extract (500 mg/kg) significantly and markedly increased the urine output ($p < 0.01$). The pattern of diuresis induced by the methanol extract was almost similar to that produced by the furosemide. These findings suggest the possible traditional use of this plant as diuretics.*

### *[48]Effect of MUSA Tablet on Ethylene Glycol-Induced Urolithiasis in Rats*

*Treatment with Musa tablet restored the phosphate level, thus reducing the risk of stone formation. In urolithiasis, the glomerular filtration rate(GFR) decreases due to the obstruction to the outflow of urine by stones in the urinary system because of that waste products, particularly nitrogenous substances such as urea, creatinine and uric acid get accumulated in blood. However, the curative treatment with product Musa tablet caused diuresis and hastened the process of dissolving the preformed stones and prevention of new stone formation in the urinary system. The diuretic effect of Musa tablet was evident from urine volumes collected when compared to the model control group.*

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[47] *(http://scholars research library.com)*

[48] *International journal of research in pharmaceutical and biomedical sciences*

## [49]*ANTIDIABETIC AND ANTIOXIDANT ACTIVITIES OF STEM JUICE OF MUSA PARADISIACA ON ALLOXAN INDUCED DIABETIC RATS*

*Phytochemical screening on the stem juice of M. paradisiaca reveals that the extract contained various pharmacologically active compounds such as tannins and alkaloids. In alloxan--treated diabetic rats receiving stem juice of musa decrease of blood glucose levels in comparision to diabetic control and this could be due to the possibility that some ß--cells are still surviving to act upon by M. paradisiaca to exert its insulin releasing effect. This suggests that the mode of action of the active ingredients of M. paradisiaca is probably mediated by an enhanced secretion of insulin, like sulphonyl ureas.*

## *PIPER BETLE, Linn*

### [50]*Radio protective activity*

*Mammalian systems if exposed to radiation can cause damaging effects leading to cell death and an increased risk of degenerative diseases. Recently the radioprotective property of ethanolic extract of P.betle leaves was studied as alternative low cost preventive medicine to synthetic radioprotectants which are reported to be toxic. The capacity of the extract in preventing g-ray induced lipid peroxidation and DNA damage in rat liver mitochondria were assessed and evaluated to establish the mechanism of its radioprotective action. The study revealed significant immunomodulatory and superior radical scavenging activities which may be due to the presence of phenolic bioactives such as chavibetol and allyl pyrocatechol*

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[49] *An international journal of advances in pharmaceutical sciences , www.pharmanest.in, balasu_sunitha2001@yahoo.com*

[50] *Available online on www.ijprd.com*

[51]***Protective and healing activity***

*Most recently, a study was undertaken to evaluate the protective and healing effects of allylpyrocatechol against the indomethacin-induced stomach ulceration in rat model. Results showed that allylpyrocatechol can protect indomethacin-induced gastric ulceration due to its antioxidative and mucin protecting properties.*

[52]***Antibacterial activity:***

*The bioactive molecule thought to be responsible for antibacterial activity is sterol which has been obtained in large quantities in piper betle extract .The mode of action is surface interaction of sterol with the primary structure of cell wall membrane, ultimately leading to pore formation and degradation of bacterial component*

[53]***Anti inflammatory activity:***

*Eugenol, one of the principal constituent of betle shows to possess anti inflammatory effects in various animal models of studies with various inflamogens.*

[54]***DIURETIC ACTIVITY OF AQUEOUS EXTRACT OF RAPHANUS SATIVUS***

*Diuretic activity of aqueous extract of Raphanus sativus using Albino Wistar rats. Phytochemical screening showed that positive tests for the presence of triterpenes, alkaloids, flavanoids, saponins and coumarins glycoside . Results revealed that the cumulative urine volume collected at 5 hrs after the treatment of extracted drug exceeds Furosemide, the increase in urine volume with marked increase in*

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[51] *www.ijprd.com, International Journal of Pharmaceutical Research & Development*

[52] *International Journal of Pharmacy and Pharmaceutical Sciences Vol 3, Suppl 3, 2011*

[53] *Dohi et al., 1989; Lee et al., 2007*

[54] *European Journal of Biological Sciences 3 (1): 13-15, 2011 ISSN 2079 – 2085, Copy right – IDOSI Publications, 2011*

*excretion of sodium, potassium and chloride clearly indicated and confirmed the diuretic activity of aqueous exract of Raphanus sativus.*

### [55]ANTILITHIASIC AND HYPOLIPIDAEMIC EFFECT OF RAPHANUS SATIVUS

*The compound glucoraphanin is responsible for lowering cholesterol and triglyceride in the serum of the mice in the study. A hypolipidaemic effect is directly related to prevention of Gallstones. The reduction in plasma cholesterol is a direct consequence of decrease in intestinal absorption.*

### [56]HEPATOPROTECTIVE ACTIVITY OF RAPHANUS SATIVUS

*The methanol extract of Raphanus sativus root extract showed a protective effect on paracetamol induced hepatotoxicity in a dose-dependent manner. This study indicates the involvement of Raphanus sativus root extract with antioxidants like glutathione and catalase in rendering protection against paracetamol-induced hepatotoxicity.*

### [57]ANTI-MICROBIAL ACTIVITY OF RAPHANUS SATIVUS

*The plant contains raphanin, which is antibacterial and antifungal. It also has been found to be strongly active on Escherichiacoli, Pseudomonas pyocyaneus, Salmonella typhi and Bacillus subtilis.*

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[55] *Journal of Bio medicine and Bio technology Volume 2012*

[56] *Department of Biological Sciences University of Botswana*

[57] *IJDFR volume 3 Issue 1, Jan- Feb. 2012*

## MATERIALS AND METHODS FOR PREPARATION

***COLLECTION OF TEST DRUG:***

- *The raw drug Vediuppu (Potassium nitrate) was purchased from a raw drug trader at Madurai.*
- *The raw drugs Vetrilai (Betle leaves) were purchased from the local trader.*

***AUTHENTICATION:***

*Gunapadam experts of the Gunapadm department of Siddha medical college, Palayamkottai, authenticated the trial drug. The method of preparation was collected from Kannusamy parambarai vaithiyam (Pg. no. 371).*

***PURIFICATION:***

- *One part weight of powdered Vediyuppu was mixed with two parts weight extract of the tuber of Musa paradisiaca and kept undisturbed. Then clear upper portion was taken and heated in an iron pan. Once the water contents got evaporated the sediments were kept for condensation in a copper pan. Likewise 2 part extract of tuber of Musa paradisiaca was added to the same Vediuppu and heated again. The process was repeated for five to seven times.*
- *The leaves of Piper betle were cleaned thoroughly and juice was extracted.*

***PREPARATION:***

*A quantity of 5 palams (175 gms) of purified Vediuppu (Nitrate of Potassium) was taken accurately weighed and put into a mud pot. The pot was placed on a fire of kiln. When the salt in the pot got melted, an alakku (168 ml) extract of Nagavalli leaves (vetrilai) was added to it and the content of pot was well stirred and heated till the water portion got*

*reduced with the sound ending of chidu chidu. Then the content of the pot was poured on a clean kalvam. After cooling the content, it was transferred from the kalvam to the mud pot along with the Nagavalli leaves extract added again and then it was burnt to the extent that the content to appear as if it was cooked food.*

*The process was repeated for three times until the content of the pot become red in colour. Then the content was cooled and ground into fine powder and stored in a clean and dry containers.*

***Administration of the Drug:***

| | | |
|---|---|---|
| *Form of Medicine* | *:* | *CHENDHURAM* |
| *Route of Administration* | *:* | *ORAL* |
| *Dose* | *:* | *130 milli gms* |
| *Anubanam (Vehicle)* | *:* | *Juice of Raphanus sativus* |
| *Times of Administration* | *:* | *Two times per day before food* |

## *STANDARDISATION OF THE DRUG*

## *PHYSICO-CHEMICAL ANALYSIS*

***PROCEDURES:***

***Total ash***

*Two grams of grounded air-dried Vediuppu chendhuram was accurately weighed in a previously ignited and tared silica crucible. The drug was gradually ignited by raising the temperature to 450°C until it was white. The sample was cooled in a desiccator and weighed. The percentage of total ash was calculated with reference to air-dried drug.*

***Acid Insoluble ash***

*The ash was boiled with 25 ml of 2 M hydrochloric acid for 5 minutes, the insoluble matter was collected on an ash less filter paper, washed with hot water, ignited, cooled in a desiccator, and weighed. The percentage of acid insoluble ash was calculated with reference to the air-dried drug.*

***Water Soluble ash***

*The ash was boiled with 25 ml of water for 5 minutes, the insoluble matter on ash less filter paper collected, washed with hot water, ignited, cooled in a desiccator, and weighed. The weight of the insoluble matter from the weight of the total ash was subtracted; the difference represents the water soluble ash. The percentage of water insoluble ash was calculated with reference to the air-dried drug.*

***Moisture content:***

*The shade-dried Vediuppu chendhuram was grounded in a mixer grinder. The powder passed through #40 and retained on #120. Accurately weighed 10 g of # 40/120 Vediuppu chendhuram powder was kept in a tared evaporating dish. This was dried at 105°C for 5 hours in*

*tray drier and weighed. The drying was continued and weighing was done at one-hour interval until difference between two successive weighings corresponds to not more than 0.25 percent. Drying was continued until a constant weight was reached with two successiveweighings after drying for 30 minutes and cooling for 30 minutes in a desiccator wasshowing not more than 0.01 g difference.*

***Potential of Hydrogen (pH):***

*The pH scale is logarithmic and runs from 0.0 to 14.0 with 7.0 being neutral.*

*Readings less than 7.0 indicate acidic solutions, while higher readings indicate alkalineor base solutions.*

## BIO-CHEMICAL ANALYSIS OF VEDIUPPU CHENDHURAM

***PREPARATION OF EXTRACT:***

*100mgs of Vediuppu Chendhuram is weighed accurately and placed into a clean beaker, few drops of Hydrochloric acid added to it and evaporated well. After evaporating, the content is allowed to cool and then a few drops of nitric acid added and evaporated well. After cooling the content add 20ml of distilled water and is allowed to dissolve well. Then it is transferred to 100ml volumetric flask and made up to 100ml with distilled water. The content is mixed and filtered well. Then the extract is taken for analysis.*

***QUALITATIVE ANALYSIS:-***

| S.No | EXPERIMENT | OBSERVATION | INFERENCE |
|---|---|---|---|
| *1* | ***TEST FOR CALCIUM****:* *2ml of the above-prepared extract is taken in a clean test tube. 2ml of 4% Ammonium oxalate solution is added to it.* | *A white precipitate is formed* | *Indicates the presence of calcium* |
| *2* | ***TEST FOR SULPHATE:*** *2ml of the extract is added to 5% of barium chloride solution* | *A white precipitate is formed* | *Indicates the presence of sulphate* |
| *3* | ***TEST FOR CHLORIDE:*** *The extract is treated with silver nitrate solution* | *A white precipitate is formed* | *Indicates the presence of chloride* |
| *4* | ***TEST FOR CARBONATE:*** *The extract is treated with concentrated HCL* | *No brisk effervescences formed* | *Indicates the absence of carbonate* |

| | | | |
|---|---|---|---|
| *5* | ***TEST FOR STARCH:*** *The extract is added with weak iodine solution.* | *No blue colour developed* | *Indicates the absence of starch* |
| *6* | ***TEST FOR ZINC:*** *The extract is treated with potassium Ferro cyanide.* | *No white precipitate is formed* | *Indicates the absence of zinc* |
| *7* | ***TEST FOR IRON FERRIC:*** *The extract is treated with glacial acetic acid and potassium Ferro cyanide.* | *Blue colour is formed* | *Indicates the presence of ferric iron* |
| *8* | ***TEST FOR IRON FERROUS:*** *The extract is treated with concentrated Nitric acid and ammonium thio cyanate.* | *Blood red colour is formed* | *Indicates the presence of ferrous iron* |
| *9* | ***TEST FOR PHOSPHATE:*** *The extract is treated with ammonium molybdate and concentrated Nitric acid.* | *No yellow precipitate is formed* | *Indicates the absence of phosphate* |
| *10* | ***TEST FOR ALBUMIN:*** *The extract is treated with Esbach's reagent.* | *No yellow precipitate is formed* | *Indicates the absence of Albumin* |
| *11* | ***TEST FOR TANNIC ACID:*** *The extract is treated with ferric chloride.* | *No blue precipitate is formed* | *Indicates the absence of Tannic acid* |

| | | | |
|---|---|---|---|
| *12* | ***TEST FOR UNSATURATION:*** *Potassium permanganate solution is added to the extract.* | *It doesn't get decolorized* | *Indicates the absence of unsaturated compound* |
| *13* | ***TEST FOR REDUCING SUGAR:*** *5ml of Benedict's qualitative solution is taken in a test tube and allowed to boil for 2 minutes and added 8 - 10 drops of the extract and again boil it for 2 minutes.* | *No colour change occurs* | *Indicates the absence of reducing sugar* |
| *14* | ***TEST FOR AMINO ACID:*** *One or two drops of the extract is placed on a filter paper and dried it well. After drying, 1% Ninhydrin is sprayed over the same and dried it well.* | *No violet colour is formed* | *Indicates the absence of Amino acid* |

***INFERENCE:***

*The given sample of VEDIUPPU CHENDHURAM contains*

- *CALCIUM*
- *SULPHATE*
- *CHLORIDE*
- *FERRIC IRON*
- *FERROUS IRON*

## [58]*PRECLINICAL PHARMACOLOGICAL STUDY OF VEDIUPPU CHENDHURAM (VC) ON ETHYLENE GLYCOL INDUCED UROLITHIASIS IN RATS*

***Test Drugs:***

*The medicineVediuppu chendhuram(VC) used in the study was processed by the methods prescribed in standard textbooks of Siddha medicine.*

***Preparation of drug for dosing:***

*All drugs used for the study was suspended each time with 1% (w/v) solution of sodium carboxy methylcellulose before administration.*

***Drugs and chemicals:***

*Fine chemicals used in these experiments were obtained from Sigma Chemicals Company, U.S.A. Other analytical grade chemicals were obtained from S.d. Fine Chemicals Ltd., Mumbai. Standard drug Cystone (Himalya Drug Company product) procured from market.*

***Experimental animals:***

*Male albino rats of wistar strain weighing between 200-250gm were used. The animals were fed with commercial rat feed pellets(Tanuvas,Chennai) and water ad libitum.*

*Animals were housed in plastic cages with filter tops under controlled conditions of 12:12 light dark cycle, 50 humidity and 28 c. All animal experiments and maintenance were carried out according to the ethical guidelines suggested by the IAEC. (IAEC/XXXV/61/CLBMCP/2012).*

[58] Done at C.L. Baid Metha College of Pharmacy, Chennai

***Urolithiatic activity:***

*Animals were divided in to five groups containing six animals in each group and received the following regimen of treatment.*

***Group I*** - *Served as normal control received 1%CMC 10ml/kg/po.*

***Group II*** - *Received Ethylene glycol (0.75%) in drinking water for 28 days and served as negative control.*

***Groups III*** - *Rreceived EG (0.75%) in drinking water for 28 days and also received the test drug VC(25mg/kg/po simultaneously for 28 days*

***Group IV*** - *Animals received EG in the same dose and period mentioned for group III and simultaneously received Standard drug Cystone(500mg/kg/po)*

***Group V*** - *Animals received VC at the dose of 25mg/kg/po for 28 days and used for the 28 days chronic toxicity study to assess the toxicity, if any in comparison to the normal control(Group-1)*

*All drugs were given once daily by oral route using blunt metal needle fitted with PVC tube .24 hrs urine samples were collected and analysed for calcium, magnesium, oxalate, inorganic phosphate, using standard procedures .*

***ASSESSMENT OF ANTIUROLITHIATIC ACTIVITY:***

***Collection and analysis of urine:***

*All the animals were kept in individual metabolic cages and urine samples of 24 h were collected on the 28$^{th}$ day. Animals had free access to drinking water during the urine collection period. A drop of concentrated hydrochloric acid was added to the urine before being stored at 4°C. Urine was analyzed for calcium, phosphate, and oxalate content using the method of Bahuguna et al.*

***Serum analysis:***

*After the experimental period, blood was collected from the retro-orbital under anesthetic condition and animals were sacrificed by cervical decapitation. Serum was separated by centrifugation at 10 000 × g for 10 min and analyzed for creatinine, uricacid, and urea nitrogen .*

***Urine volume:***

*Animals were placed in separate metabolic cages for 24 h and total urinary volume was measured using the measuring cylinder and reported in ml.*

***Urine pH:***

*Uric acid crystals were found to deposit most frequently in the concentrated acid urine. Thus, the acidity of the urine was tested using the pH meter.*

***Statistical Analysis:***

*Statistical evaluation was done using Student "t'test. Statistical significant was set at $P < 0.05$. Results are presented as mean ± standard error of mean (SEM).*

## *ANALYSIS OF DIURETIC EFFECT OF VEDIUPPU CHENDHURAM*

***AIM:***

*To evaluate the diuretic effect of Vediuppu chendhuram.*

***PREPARATION OF TEST DRUG:***

*100 mg of Vediuppu chendhuram extract was dissolved in 5 ml of distilled water, thus 1 ml contains 20 mg of Vediuppu chendhuram extract.*

***PROCEDURE:***

*The method of lipschitiz et.al was employed for the assessment of diuretic activity. Groups of 9 male albino rats, each weighing 80-120 gm were fasted and deprived of water for 18 hours prior to the experiments. They are divided into 3 equal groups of rats each and put into 3 different metallic cages. On the day experiment all the animals were given normal saline orally 2.5 ml / 100 gm body weight. Group I served as the negative control which received only normal saline 2.5 ml / 100 gm. Group II received Frusemide 2 mg / 100 gm as reference diuretic and Group III received least drug at a dose at a dose of 20 mg / 100 gm orally, 1 hour prior to the administration of normal saline.*

*Immediately after dosing, the animals were placed in metabolic cages specially designed to separate urine and faeces and kept at room temperature of 25* ± 0.5* C. The urine was collected in measuring cylinder upto 5 hours after dosing. During this period no water and food was made available to the animals. The total volume of urine collected was measured for the control and treated groups .The results are evaluated in the forthcoming coming chapter(S.no-).*

## *ANTI-SPASMODIC EFFECT OF VEDIUPPU CHENDHURAM ON ISOLATED RABBIT JEJUNUM*

***AIM:***

*To find out the Anti-spasmodic effect of VEDIUPPU CHENDHURAM on isolated Rabbit jejunum (Burn - 1952)*

***PREPARATION OF THE TEST DRUG:***

*100mg of VEDIUPPU CHENDHURAM was dissolved in 10ml of water. Then it was used for the experiment.*

***SOLUTIONS REQUIRED:***

*Acetyl choline - 10µg/ml*

*Test drug - VEDIUPPU CHENDHURAM100mg/ml*

***NUTRIENT SOLUTION:***

*Tyrode solution - 1 to 2 litres*

*Tyrode solution (1 litre)*

- *NaCl - 8 gms*
- *KCl - 0.2 gms*
- *$CaCl_2$ - 0.2 gms*
- *$MgSO_4$ - 0.26 gms*
- *$NaH_2PO_4$ - 0.05 gms*
- *$NaHCO_3$ - 1 gms*
- *Glucose - 1 gms*

***TISSUE USED:***

*Rabbit jejunum*

***APPARATUS REQUIRED:***

*Student's organ bath, Sherrington rotating drum, scissors, cotton thread etc.*

***PROCEDURE:***

*A rabbit was starved for 48 hours and was allowed only water ad-libitum. It was sacrificed by a blow on the head and by carotid bleeding. The abdomen was quickly opened and the ileocaecal junction was found out. A small piece of ileal portion was cut, removed and placed in a dish, containing warm aerated Tyrode solution. The contents of lumen of the ileum was gently rinsed out by pushing the tyrode solution into it. 3 cm length segment was cut from this part of ileum and was tied with thread on both ends separately without closing the lumen and the tissue was mounted in an organ bath, containing Tyrode solution maintained at $37^{o}C$, bubbled with air by an oxygen tube.*

*First the rotating drum was allowed to run for 1 minute to record the baseline. Drugs were given to study the inhibiting effect of Acetyl Chlorine. 0.2 ml of Acetyl Chlorine was added and the drum was allowed to run for 30 seconds. Thus the tissue was standardized and then the drum was stopped and the Acetyl Chlorine was washed out.*

*Again Tyrode solution was added to the organ bath till the level comes to the baseline. The drum was allowed to run for 1 minute. To the organ-bath, 1 ml of test drug was added, waited for one minute and 0.2 ml of Acetyl Chlorine was added and the drum was allowed to run for 30 seconds to record the inhibitory action of the test drug. Then 0.2 ml of Acetyl Chlorine was added to standardize the tissue. Then the tracing was labeled and fixed.*

***INFERENCE:***

*From the graph it is inferred that the test drug antagonize the effect of Acetyl Chlorine when added together. So, the drug* ***VEDIUPPU CHENDHURAM*** *has got* ***significant Anti-spasmodic activity.***

# ANTI - MICROBIAL ACTIVITY

***- By KIRBY BAUER METHOD***

***AIM:***

*To determine the anti - microbial sensitivity of Vediuppu Chendhuram by disc diffusion method – Kirby Bauer method.*

***PROCEDURE:***

***INOCULUM PREPARATION:***

*The microorganisms were inoculated in 10 ml of peptone water under sterile condition. The inoculum is incubated at 37'C for two hours. Then the turbidity of the inoculum is adjusted to 0.5 micro C farland standard. The inoculum was poured in a Muller Hington agar plate and uniformly spreaded over the plate. Esherichia coli and Klebsiella pneumoniae inoculated separately.*

***COMPONENTS OF MULLER HINGTON AGAR MEDIUM:***

| | | |
|---|---|---|
| *Beef Extract* | *:* | *300 gms / lit* |
| *Agar* | *:* | *17 gms / lit* |
| *Starch* | *:* | *1.5 gms / lit* |
| *Casein Hydroxylate* | *:* | *17.5 gms / lit* |
| *Distilled water* | *:* | *1000 ml.* |
| *PH* | *:* | *7.6* |

***DISC PREPARATION:***

*Vediuppu Chendhuram is impregnated in a 6 mm diameter filter paper disc and applied over the inoculum. Then the Muller Hington agar plate is incubated at 37'C for over night. The zone of clearance is measured with a scale and the sensitivity of the organism to the Vediuppu Chendhuram is assessed. Antimicrobial susceptibility is proportional to the diameter of the inhibitory zone around the disc.*

*The plates after 24 hrs incubation are observed for the zone of inhibition.*

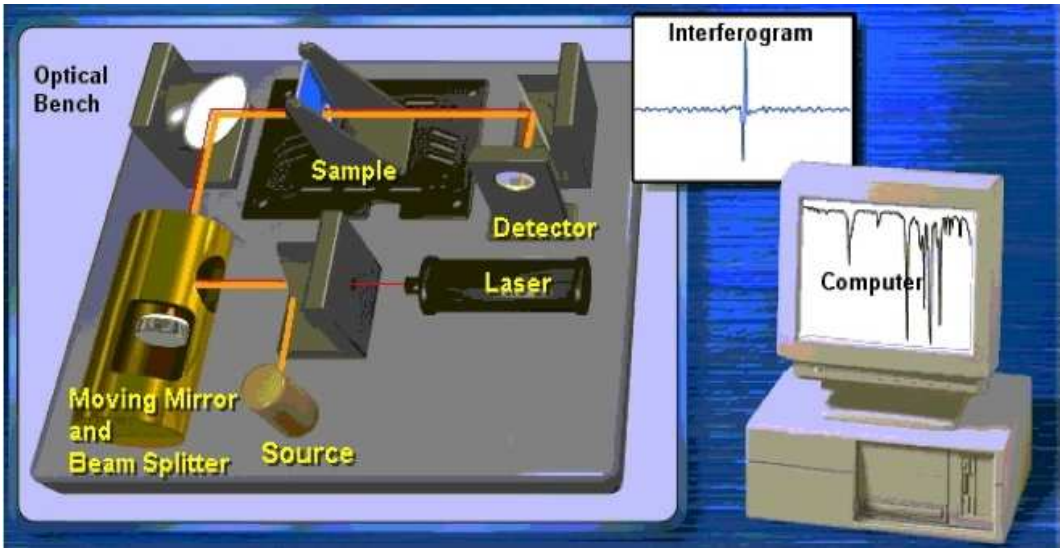
***RESULT:***

| S.NO | TEST DRUG | ORGANISMS (Culture) | SUSCEPTIBILITY | ZONE SIZE (mm) | |
|---|---|---|---|---|---|
| | | | | CONTROL | TEST DRUG |
| 1 | VEDIUPPU CHENDHURAM | Escherichia coli | Moderate | 22 | 15 |
| 2 | | Klebsiella pneumoniae | Sensitive | 25 | 22 |

## *S E M – SCANNING ELECTRON MICROSCOPE*

*In a typical SEM, an electron beam is thermionically emitted from an electron gun fitted with a tungsten filament cathode. Tungsten is normally used in thermionic electron guns because it has the highest melting point and lowest vapour pressure of all metals, thereby allowing it to be heated for electron emission.. The electron beam, which typically has an energy ranging from 0.2 keV to 40 keV, is focused by one or two condenser lenses to a spot about 0.4 nm to 5 nm in diameter. The beam passes through pairs of scanning coils or pairs of deflector plates in the electron column, typically in the final lens, which deflect the beam in the x and y axes so that it scans in a raster fashion over a rectangular area of the sample surface. The beam current absorbed by the specimen can also be detected and used to create images of the distribution of specimen current. Each pixel of computer video memory is synchronized with the position of the beam on the specimen in the microscope, and the resulting image is therefore a distribution map of the intensity of the signal being emitted from the scanned area of the specimen. In older microscopes image may be captured by photography from a high-resolution cathode ray tube, but in modern machines image is saved to a computer data storage.*

***F T I R – FOURIER TRANSMISSION INFRARED SPECTROSCOPY:***




*In infrared spectroscopy, IR radiation is passed through a sample. Some of the infrared radiation is absorbed by the sample and some of it is passed through (transmitted). The resulting spectrum represents the molecular absorption and transmission, creating a molecular fingerprint of the sample. Like a fingerprint no two unique molecular structures produce the same infrared spectrum. This makes infrared spectroscopy useful for several types of analysis.*

## *INDUCTIVELY COUPLED PLASMA OPTIC EMISSION SPECTROSCOPY (ICP – OES)*

***Inductively coupled plasma optic emission spectroscopy*** *(ICP-OES), also referred to as inductively coupled plasma optical emission spectrometry (ICPOES), is an analytical technique used for the detection of trace metals. It is a type of emission spectroscopy that uses the inductively coupled plasma to produce excited atoms and ions that emit electromagnetic radiation at wavelengths characteristic of a particular element. The intensity of this emission is indicative of the concentration of the element within thesample.*

## [59]*PRECLINICAL TOXICOLOGICAL STUDY OF VEDIUPPU CHENDHURAM (VC)*

### *MATERIALS AND METHODS:*

#### *Test Drugs:*

*The medicineVediuppu chendhuram (VC) used in the study was processed by the methods prescribed in standard textbooks of Siddha medicine.*

#### *Preparation of drug for dosing:*

*All drugs used for the study was suspended each time with 1% (w/v) solution of sodium carboxy methylcellulose before administration.*

#### *Experimental animals:*

*Colony inbred wistar rats of either sex weighing 200 - 250 g were used for the pharmacological and toxicological studies. The animals were kept under standard conditions 12:12 (day/night cycles) at $22^0$C room temperature, in polypropylene cages. The animals were fed on standard pelleted diet (Hindustan Lever Pvt Ltd., Bangalore) and tap water ad libitum. The animals were housed for one week in polypropylene cages prior to the experiments to acclimatize to laboratory conditions. The experimental protocol was approved by the Institutional Animal Ethical Committee (IAEC)(IAEC/XXXV/61/CLBMCP/2012).*

#### *Acute oral toxicity study:*

*Acute oral toxicity was conducted as per the OECD guidelines (Organization of Economic Cooperation and Development) 423 (Acute Toxic Class Method). The acute toxic class method is a stepwise procedure with 3 animals of a single sex per step. Depending on the mortality and /or moribund status of the animals, on the average 2-4*

[59] Done at C.L. Baid Metha College of Pharmacy, Chennai

*steps may be necessary to allow judgment on the acute toxicity of the test substance. This procedure results in the use of a minimal number of animals while allowing for acceptable data based scientific conclusion.*

*The method uses defined doses (5, 50, 300, 2000 mg/kg body weight) and the results allow a substance to be ranked and classified according to the Globally Harmonized System (GHS) for the classification of chemicals which cause acute toxicity*

*Female Wistar albino rats weighing 200-250 g were fasted overnight, but allowed water ad libitum. Wistar albino rats of either sex weighing 200-250 g were fasted overnight, but allowed water ad libitum. Since the formulation is relatively nontoxic in clinical practice the highest dose of 2000 mg/kg/p.o (as per OECD guidelines "Unclassified") was used in the acute toxicity study.*

*The animals were observed closely for behavioral toxicity, if any by using FOB (Functional observation battery).*

***Repeated oral toxicity study:***

*Repeated oral toxicity studies can be used to get additional information regarding the toxicity profile of a chemical. Repeated oral toxicity studies are defined as those studies where the chemical is administered to the animal for a period covering approximately 10% of the expected life of the animal. Usually, the dose levels are lower than for acute studies and allow chemicals to accumulate in the body before lethality occurs, if the chemical possess this ability.*

***Experimental procedure:***

*The following experimental procedure was followed to evaluate the repeated oral toxicity study of VC*

*Group I:* Control animals received 1%CMC, 2 ml/kg/p.o. for 28 days*

*Group II:* Received VC at the dose of 23mg/kg/po in 1%CMC for 28 days*

***Dose calculation:***

*The dose for rats was calculated by multiplying the daily dose used in the clinical practice( i.e.130mg BID=260mg/day) divided by a factor 0.018 corresponding to the body surface area of man weighing 70kg to rat weighing 200g.*

*Single dose 130mg, Daily dose 260mg x 0.018 =4.6mg for a rat weighing 200g. Multiply the rat dose for a rat weighing 200g x5 to get the dose for kg/body weight of rat (i.e.4.6mg x 5=23mg/kg/po) The dose is rounded off to 25mg/kg/po*

** Group I and II animals were used for the chronic toxicity study for 28 days and part of the animals were used in the experimental protocol for the urolithitic study of VC (Table- 3 ). Blood samples were collected at the end of 28 days from the respective groups to study the biochemical and hematological parameters*

*Body weight, food intake and water intake was recorded at two intervals with simultaneous observation for toxic manifestation and mortality, if any. At the end of 28 days treatment blood samples were collected by retro orbital puncture and used for hematological studies and serum was used for biochemical studies*

***BIO CHEMICAL STUDIES***

***[60]Aspartate aminotransferase(AST):***

*Aspartate aminotransferase was estimated using commercial AST kit (Span Diagnostics) by the method of Reitman and Frankel.*

***Alanine aminotransferase (ALT):***

*Alanine aminotransferase was estimated using commercial AST kit (Span Diagnostics) by the method of Reitman and Frankel .*

***[61]Alkaline phosphatase (ALP):***

*Alkaline phosphatase was assayed using commercial ALP kit (Span Diagnostics) by the method of King.*

***HEMATOLOGICAL STUDIES:***

***Erythrocyte count***

*Erythrocytes count was estimated by Hem cytometer method of Ghai.*

***Total Leukocyte Count (WBC)***

*Total Leukocyte Count was estimated by Hemo cytometer method of John .*

***[62]Hemoglobin***

*Hemoglobin was estimated by method of Ghai .*

[60] Reitman S Frankel AMJ Clinical Pathology 28
[61] King E.J. Can. Med. AssJ.
[62] Ghai C.L. Text Book of Practical Physiology Pg – 119, 202

## *CLINICAL ASSESSMENT*

*The main objective of this clinical study is to evaluate the efficacy of the trial drug Vediuppu chedhuram on Urolithiasis.*

***Objectives:***

- *To evaluate the lithotriptic, anti-spasmodic and diueretic activity of Vediuppu chendhuram.*
- *To explore the efficacy of Vediuppu chendhuram in OP patients with Urolithiasis (Kalladaippu).*

***Design of the Study:***

- *The Open clinical trial phase-2B*

***Study Centre****:*

*Govt. Siddha medical college and hospital, Palayamkottai.*

***Study Participants:***

*Both men and women members of all races and ethnic groups were eligible for this trial. Treatment was being administered on an outpatient basis. The patients were selected from the Out-patient department of Govt Siddha medical college and hospital, Palayamkottai.*

***Number of Subjects:***

*Number of participants will be 35 - 40.*

***Registration Process:***

*To register a patient, the following documents should be completed by the investigator.*

- *Copy of required laboratory tests*
- *Signed patient consent form*
- *Other appropriate forms (e.g., Trial profoma).*

*This Clinical trial is an ethical and scientific quality standard for designing, conducting and recording trials that involve the participation*

*of human subjects. Compliance with this standard provides assurance to public that the rights, safety and well being of trial subjects are protected, consistent with the principles enshrined in the Declaration of Helsinki and ensures that clinical trial data are credible*

***Selection of patients:***

*The patients were selected for clinical trials as per the following criterias, which are listed below*

- *Loin pain*
- *Groin pain*
- *Difficulty in micurination*
- *Back pain*

***Consent form:***

*Patients were included in this clinical study only after getting the concern form accordance of _Helsinki'. Voluntary written assent of a subject's willing to participate in this study and in its documentation. The confirmation is sought only after information about the trial including an explanation of its status as research, its objectives, potential benefits, risks and inconveniences, alternative treatment that may be available and of the subject's rights and responsibilities has been provided to the potential subject. The patients were selected for clinical trials as per the following criterias, which are listed below*

***Inclusion criteria:***

- *Pain abdomen*
- *Pain in the loin radiating to groin*
- *Intermittent dull pain in the loin*
- *Burning micturition*
- *Dysuria*

- *Haematuria*
- *Increased frequency of micturition*
- *Nausea*
- *Vomiting*
- *Presence of crystals in the urine*
- *Ultrasonogram of abdomen and pelvis with positive results for Kalladaippu Noi.*

***Exclusion criteria:***

- *Renal calculus with renal failure.*
- *Renal calculus with acute sever colic pain associated with severe vomiting*
- *Renal calculus found along wth malignancy of kidney*
- *Uretric calculus with urethral obstruction.*

***Withdrawal criteria:***

- *Exacerbations of symptoms*
- *Unacceptable adverse events*
- *Patient decided to withdraw from the study*
- *Irregular visit*
- *Irregular Medications*

***Investigations criteria:***

***Blood****: TC, DC, ESR, Hb, blood sugar PP.*

***Urine****: Albumin, Sugar and Deposits*

***X- Ray:*** *Abdomen and pelvis*

***USG****: Abdomen, KUB*

***LINE OF TREATMENT:***

*The patients were orally administered Vediuppu chendhuram in a dose of 130 mg along with juice of Raphanus sativus twice a day.*

*Ultrasonogram abdomen and pelvis, clinical pathological examination were carried out before and after treatment. The clinical improvements were recorded for every seven days.*

***Drug and dosage:***

| | | |
|---|---|---|
| ***Drug*** | ***:*** | *Vediuppu chendhuram* |
| ***Route*** | ***:*** | *Enternal* |
| ***Dose*** | ***:*** | *130 mg twice a day* |
| ***Vehicle*** | ***:*** | *Water* |

***Dietery advice:***

*Therapeutic foods or **nutrients** that help controlling asthma are: Omega-3 and omega-6 **fatty acids**, foods high in flavonoids and beta carotene, Vitamin B12, Vitamin B6 (Vitamin B6 deficiency is common in asthmatics), high amounts of **vitamin B12 supplements** (1,500 mcg per day) have been found to reduce the tendency for asthmatics to react to sulfites, Selenium, **Vitamin E, Vitamin C,** and Magnesium (magnesium can prevent spasms of the bronchial passages).*

***Medical advice:***

- *Patients are advised to avoid known offending allergen which is identified either by experience or by skin sensitivity test.*
- *Take light meals at night and try to sleep early*
- *Drink plenty of water*
- *Try to avoid dust, cigarette smoke and smoky surroundings.*

- *Avoid cold water bath.Avoid cold, deep fried food.*
- *Avoid keeping pets such as dogs, cats.*
- *Avoid alcohol, lime and bananas.*
- *Advice to do breathing exercise*

***Criteria for assessment of response to therapy:***

1. ***Marked Relief:*** *75%-90% relief in the presenting signs and symptoms marked normality pathological investigation.*
2. ***Moderate Relief:*** *60%– 75% relief signs and symptoms, moderate normality of pathological investigation.*
3. ***Mild Relief:*** *50%-60% relief of signs and symptoms no marked changes in pathological investigations.*
4. ***Poor:*** *Below 50% relief of signs and symptoms*

***Observation:***

- *The duration of the treatment ranged between 45-90 days.*
- *At the time of treatment, no adverse effects were observed.*
- *The drug was well accepted by all the patients.*

## *BIO STATISTICAL ANALYSIS*

***AIM:***

*The study subjects and the effectiveness of the drugs were analyzed as Mean, Standard deviation and Percentages. The interpretations were made on the basis of student, 't' test.*

***RESULT AND DISCUSSIONS:***

*The study subjects were analyzed based on their age and sex. Since the age and sex were independent variable.*

***AGE AND SEX:***

*The study subjects from the study are 40 in numbers. Among them 32 are male and 8 are female. They were described by their age and sex as follows*

***Age and Sex wise distribution of study subjects shown in Table – 1***

| S. No | Sex | n | Age | | 't test' | Significance |
|---|---|---|---|---|---|---|
| | | | Mean | Std. Deviation | | |
| 1 | Male | 32 | 42.84 | 14.28 | 0.0097 | P < 0.01 |
| 2 | Female | 8 | 30.88 | 10.67 | | |
| 3 | Total | 40 | 40.45 | 14.35 | | |

*The above study clearly shows the mean age of male clinical trial is 42.84 ± 14.28 and the mean age of female clinical trial is 30.88 ± 10.67. The difference in the mean ages are statistically significant with the 't' test value as 0.0097 which means P<0.01.*

*The mean age of total study subject is 40.45 ± 14.35 years.*

***EFFECTIVENESS OF DRUG:***

*Among 40 clinical trials, 13 were affected by Kalladaippu in both the kidneys. The remaining were affected in either of the kidneys. The analysis were made by taking the un affected kidney as normal since no calculus was found. After treatment also the calculus was not found in the kidney, it is also taken as normal and response is good.*

***Distribution of calculus of the study subjects in right and left kidneys of before and after treatment shown in Table - 2***

| S. No | Kidney | N | Calculus before treatment | | Calculus after treatment | | Mean difference | 't' test value | Significance |
|---|---|---|---|---|---|---|---|---|---|
| | | | Mean | S.D | Mean | S. D | | | |
| 1 | Right Kidney | 29 | 8.18 | 8.61 | 3.47 | 9.28 | 4.71 | 2.50 | P<0.05 |
| 2 | Left Kidney | 23 | 5.88 | 2.30 | 0.87 | 1.47 | 5.01 | 0.17 | P<0.001 |

*The above table clearly shows the effectiveness of Vediuppu chendhuram in curing Kalladaippu. The right kidney had a mean size of 8.18 mm calculus before under going treatment. After the treatment the mean calculus size is 3.47 mm. The mean reduction is 4.71. The reduction is the effect of the drug, since the reduction is statistically significant. Similarly, the left kidneys of the study subjects are also 5.01 of mean reduction observed. This is also very statistically significant.*

*The above interpretation of the effectiveness of the drug was supported by the analysis of response. Among the 40 affected clinical trials 30 were cured with 75% percentage of curing and they are treated as good response. Out of this only 7 cases (17.5%) were partially cured which were treated as fair responses and 3 cases (7.5%) were treated as poor responses.*

## *OBSERVATION AND RESULTS*

*This study has been done to establish the role of Vediuppu chendhuram as a Lithotriptic agent and assess that how far it can help in the management of Kalladaippu.*

*Among the symptoms of Kalladaippu noi burning micturition, dysuria, radiating pain from loin to groin were reduced significantly within 7 days, other symptoms gradually subsided during the remaining course of treatment.*

*The treatment was given from 28 to 48 days, graduation of result and clinical assessment are tabulated. Among 40 cases, 30 cases (75%) showed good response in the gradual relief of signs and symptoms. 7 cases (17.5%) showed fair response and 3 cases (7.5%) showed poor response.*

***The age and sex incidence of these cases are shown in Table – 1***

| ***S. No*** | ***Age in Years*** | ***Sex*** | | ***Total*** |
|---|---|---|---|---|
| | | ***Male*** | ***Female*** | |
| *1* | *11 – 20* | *1* | *-* | *1* |
| *2* | *21 – 30* | *7* | *2* | *9* |
| *3* | *31 – 40* | *8* | *5* | *13* |
| *4* | *41 – 50* | *10* | *2* | *12* |
| *5* | *51 – 60* | *2* | *-* | *2* |
| *6* | *61 – 70* | *2* | *-* | *2* |
| *7* | *Above 70* | *1* | *-* | *1* |
| ***TOTAL*** | | | | ***40*** |

***The drug efficacy on Renal calculus, ureteric calculus and vesicle calculus are shown in Table – 2***

| *S. No* | *Site of Calculus* | *No. of cases treated* | *No. of cases cured* | *Percentage of cured* |
|---|---|---|---|---|
| *1* | *Renel calculus* | *28* | *26* | *92.8%* |
| *2* | *Ureteric calculus* | *5* | *3* | *60.0%* |
| *3* | *Vesicle calculus* | *1* | *0* | *0%* |
| *4* | *Ureteric calculus + Renel calculus* | *4* | *3* | *75.0%* |
| *5* | *Vesicle calculus + Renel calculus* | *2* | *1* | *50.0%* |

***The drug efficacy is based on the size of the calculus are shown in Table – 3***

| *S. No* | *Site of Calculus* | *No. of cases treated* | *No. of cases cured* | *Percentage of cured* |
|---|---|---|---|---|
| *1* | *5 mm and below* | *16* | *16* | *100%* |
| *2* | *6 mm to 10 mm* | *18* | *13* | *72.20%* |
| *3* | *Above 10 mm* | *6* | *4* | *66.67%* |

***Gradation of Results Table – 4***

| *S. No* | *Results* | *No. of cases* | *Percentage* |
|---|---|---|---|
| *1* | *Good* | *31* | *77.50%* |
| *2* | *Fair* | *7* | *17.50%* |
| *3* | *Poor* | *2* | *5.00%* |

## *RESULTS AND DISCUSSIONS*

*The study is to highlight the efficacy of the herbo mineral drug VEDIUPPU CHENDHURAM in the treatment of UROLITHIASIS (KALLADAIPPU) as given in the KANNUSAMY PARAMBARAI VAITHIYAM (Pg. No. 371).*

*The study incorporates collection of literature evidences, scientific aspects of the drug, physico chemical analysis, chemical analysis, pharmacological analysis, microbiological analysis and clinical study.*

*As per Siddha concept, the disease Urolithiasis (Kalladaippu) occurs due to the vitated pithaa humour, so the trial drug which has got refrigerant activity helps in bringing down the pithaa humour. From the text Gunapadam Thaathu Jeeva Vaguppu (Pg. No. 332) the trial drug Vediuppu Chendhuram has got significant Diuretic property which hastens the property of dissolving the preformed stones and the prevention of the new stone formation in the urinary system. In the Siddha Maruthuvam Pothu it is given that the derangement of Abaana Vaayu causes crystalisation of deposits in the urine due to stasis. The diuretic property of the Vediuppu Chendhuram ease the micturition of urine, thus preventing the stone formation.*

*Physiochemical analysis:*

*The physiochemical analysis shows the total ash value, acid insoluble ash (34.65%) which helps us to interpret the digestion and solubility of the drug. The bio-chemical analysis shows the presence of calcium sulphate, chloride, ferric iron and ferrous iron.*

*[63]The **ferric iron** which is useful in the treatment of hyperphosphatemia in the same way helps in the prevention of*

[63] *execbeneifits.mworld.com – Keith Chan*

*phosphate stone formation. The ferric iron binds with the phosphate in the blood and the ferric phosphate precipitate in the gastro intestinal tract, resulting in effective removal of phosphate.The ferrous iron is associated with the immune competence of the body.*

*[64]The anupanam i.e. extract of Raphanus sativus has the property of increasing the excretion of chloride and sodium which manages the elimination of the chloride in the trial drug.*

*[65]In 1941,* ***sulpha drugs*** *were used successfully for curing Urinary tract infection. In this way the sulphate present in the trial drug helps to prevent infectious urinary calculi.*

*The pharmacological analysis shows the significant antispasmodic activity by antagonizing the effect of acetyl chloride. The trial drug has significant diuretic property.*

| ***S. No*** | ***Name of Drugs / Groups*** | ***Dose / 100 gm body weight*** | ***After Drug Administration*** | | | ***Remarks*** |
|---|---|---|---|---|---|---|
| | | | ***1.5 hrs*** | ***3 hrs*** | ***4.5 hrs*** | |
| *1* | *Control (water)* | *5 ml* | *3.0 ml* | *5.0 ml* | *6.0 ml* | *Significant and Action* |
| *2* | *Vediuppu chendhuram* | *20 mg* | *3.0 ml* | *8.0 ml* | *12.0 ml* | |

***Result:*** *The lithotriptic activity of the trial Vediuppu Chenduram is significant*

[64] *European journal of biological sciences – IDOSI Publication, 2011*

[65] *Text book of Organic Chemistry – PL Soni – Pg. No. 3.256*

***Lithotriptic effect of VC:***

*Administration of 0.75% Ethylene glycol (EG) for 28 days in drinking water resulted in hyperoxaluria in rats as evidenced by the results of the study. Oxalate, calcium and phosphorous excretion were increased in EG treated rats. Serum creatinine and blood urea nitrogen(BUN levels were increased in rats treated with EG Administration of the test drug VC at the dose of 25mg/kg/po for 28 days concurrently with EG significantly lowered the levels of oxalate, calcium and phosphorous in urine when compared to EG alone treated rats. The results of test drug VC can be compared to that of standard drug Cystone. The treatment with VC significantly($P<0.05$) increased the level of serum creatinine but this cannot be considered as an adverse reaction since anupanam given during administration of Siddha drugs plays an important role in the drug absorption and half-life of the drug in the body. Histopathological study of kidney showed the lesser nucleation of oxalate crystals in VC treated animals when compared to untreated animals. Urine volume was increased in animals treated with VC and cystone with an acidic pH and this may be accounted for the reduced crystallization of oxalate and expedited elimination from the urine*

*The test drug (VC) alone at the dose of 25mg/kg/po administered for 28 days to evaluate the toxicity, if any per se on long term use did not show evidence of liver injury and hematopoietic system toxicity. However a significant ($p< 0.05$) change in serum creatinine level was observed in rats treated with VC alone at the dose of 23mg/kg/po for 28 days. In clinical practice the drug is usually administered with specific anupanam and the anupanam may have a specific role to adjust the urine pH and plays an important role in the elimination and maintains*

*the homeostasis of serum creatinine. This hypothesis may be premature and further study is required to establish the validity of the hypothesis, both experimentally and clinically.*

*Ethylene glycol induced urolithiasis is a standard method practiced by pharmacologists to induce hyperoxaluric stones in rats.*

*Hyperoxaluria is a significant risk factor in the pathogenesis of renal calculi than hypercalcuria.In the present study urinary oxalate was increased in the EG induced urolithiasis in rats. It has been reported that oxalate plays a important role in stone formation and has about 15 times greater effect than urinary calcium.*

*The study with urinary biochemistry with respect to the stone forming minerals will provide a good indication of the risk stone formation. Hyperoxaluria in EG induced urolithic rats might be a factor favouring the nucleation and precipitation of calcium oxalate from urine and subsequent crystal growth .*

*A gradual increase in urinary phosphorous excretion was observed in EG induced urolithic rats. Increased phosphorous excretion has been reported in stone formation in clinical practice.*

*Urinary magnesium was significantly reduced in EG induced urolithic rats Magnesium complexes with oxalate, thus reducing calcium oxalate supersaturating in urine and as a consequence the nucleation rate of calcium oxalate crystals is reduced .*

*Uric acid is known to promote calcium oxalate crystal growth .*

*In the present study, higher concentration of urinary uric acid was observed in EG induced rats. Test drug treatment restored the uric acid level to near normal thus reducing risk of stone formation.*

***HP slides of kidney:***

*Microscopic examination of kidney section derived from EG induced urolithic rats showed irregular crystal deposits inside the tubules (plat-2) which causes dilation of the proximal tubules along with interstitial inflammation thus might be attributed to oxalate formation.*

*The presence of such deposits is an evidence of adhesion and retention of crystals with in renal tubules. EG induced urolithic rats treated with Cystone (standard drug-Plate-3) and test drug (VC)(Plate-4) had increased the solubilisation of oxalate crystals and restored the normal architecture of kidney.*

*In the present study an attempt has been made to evaluate the efficacy of Siddha formulation Vediuppu Chendhuram (VC) in Ethylene induced Urolithiasis in rats .Ethylene glycol induced urolithiasis is a standard test procedure to evaluate the drugs with antilithiatic effect. EG lithiasis is attributed to calcium oxalate crystal formation and has good correlation in kidney stones in humans, VC exhibited a significant pharmacological effect as an antiurolithitic drug which is established by biochemical and pathological parameters of urine, blood samples and histopathological studies. Now a correlation between the preclinical study and clinical outcome should be established to develop VC as a potential candidate for the treatment of kidney stones.*

***TABLE - 1***

***Effect of Siddha Formulations (VC) on Hematological parameters after 28 days repeated oral dosing (25 mg/kg)***

| Groups | Hb (gm/100 ml) | RBC (millions/ cu.mm) | WBC (cells/cu.mm) | Differential leucocyte count (%) | | |
|---|---|---|---|---|---|---|
| | | | | Lympho cytes | Mono cytes | Granulo cytes |
| Normal | 13.23 ± 0.56 | 4.59 ± 0.565 | 5650.08 ± 9.43 | 76.06 ± 3.27 | 5.610 ± 1.27 | 19.84 ± 4.647 |
| VC(mg/kg/po) | 13.92 ± 0.621 $^{ns}$ | 4.68 ± 0.267 $^{ns}$ | 5786.66 ± 3.823 | 77.67 ± 3.64 $^{ns}$ | 6.16 ± 1.87 $^{ns}$ | 17.36 ± 3.31 $^{ns}$ |

*n=6; Values are expressed as mean ±S.E followed by Students Paired 'T' Test*

*ns – non significant when compared to control groups*

*n=6; Values are expressed as mean ±S.E followed by Students Paired 'T' Test*

*ns – non significant when compared to control groups*

***TABLE - 2***

***Effect of Siddha formulation (VC) on Biochemical markers of liver and kidney after 28 days repeated oral dosing (25 mg/kg/po) in rats***

| Groups | AST(IU /L) | ALT(IU /L) | ALP(IU/L) | BUN(mg /dl) | Creatinine(mg/dl) |
|---|---|---|---|---|---|
| Normal | 72.64 ± 0.349 | 30.64 ± 0.821 | 158.45 ± 0.64 | 30.16±1.45 | 0.70±0.01 |
| VC(25mg/kg/po) | 81.45 ± 0.36$^{ns}$ | 28.81 ± 0.664$^{ns}$ | 161.23±0.66ns | 29.5±0.17ns | 1.07±0.01* |

*N=6; Values are expressed as mean ±S.E followed by Students Paired 'T' Test*

*Ns – non significant when compared to control groups*

**p<0.05*

***TABLE - 3***

***Effect of VC on Urinary level of Oxalate, calcium and phosphate after treatment with VC (25mg/kg/po) in EG induced Urolithiasis***

| ***Group and dose*** | ***Oxalate(mg/g)*** | ***Calcium(mg/g)*** | ***Phosphate(mg/g)*** |
|---|---|---|---|
| *Group-1 Normal control* | *0.32±0.052* | *0.36±0.31* | *3.77±0.07* |
| *Group-2 Urolithic control* | *3.94±0.61***a* | *4.28±0.19***a* | *7.02±0.05***a* |
| *Group-3 Cystone (500mg/kg/p) treated* | *0.48±0.02***b* | *1.44±0.01***b* | *3.31±0.02***b* |
| *Group-4 VC(25mg/kg/po) treated* | *0.79±0.01***b* | *1.45±0.03***b* | *4.35±0.19***b* |

*n= 6 animals values mean±SEM,** p<0.01 ***p<0.001*

*a: Control(group-1) vs Ethylene glycol induced urolithitic rats(group-2)*

*b: Goup-2 vs group 3 and 4*

***TABLE - 4***

***Effect of VC on BUN, Serum creatinine and Uric acid levels in ethylene glycol induced urolithiasis***

| ***Groups*** | ***Serum prameters(mg/dl)*** | | |
|---|---|---|---|
| | ***Blood urea nitrogen (BUN)*** | ***Cretinine*** | ***Uric acid*** |
| *Group-1 Control* | *30.16±1.45* | *0.70±0.01* | *1.42±0.031* |
| *EG treated aniamls* | *48.12±1.23***a* | *1.43±0.02***a* | *1.99±0.05***a* |
| *Cystone* | *37.40±1.89***b* | *0.87±0.01**b* | *1.41±0.06***b* |
| *VC* | *41.08±1.05***b* | *0.91±0.02**b* | *1.57±0.03**b* |

*n= 6 animals values mean±SEM,** p<0.01 ***p<0.001*

*a: Control(group-1) vs Ethylene glycol induced urolithitic rats(group-2)*

*b: Goup-2 vs group 3 and 4*

***TABLE - 5***

***Effect of VC on volume of urine and pH of urine***

***in ethylene glycol induced urolithiasis***

| ***Groups*** | ***Total volume of urine(ml)*** | ***pH of urine*** |
|---|---|---|
| *Group-1 Control* | *2.10±0.12* | *7.20±0.06* |
| *EG treated* | *1.34±0.12***a* | *8.9±0.07***a* |
| *cystone* | *4.05±0.31***b* | *7.21±0.32***b* |
| *VC* | *4.36±012.***b* | *7.18±0.10***b* |

*n= 6 animals values mean±SEM,** p<0.01 ***p<0.001*

*a: Control(group-1) vs Ethylene glycol induced urolithitic rats(group-2)*

*b: Goup-2 vs group 3 and 4*

***Microbiological Analysis:***

*Microbiological analysis shows the sensitivity of trial drug for Klebsiella pneumoniae and Esherichia coli which prevents the infection and avoid calculi formation. - Lab Report Attached For Reference*

***Toxicological Analysis:***

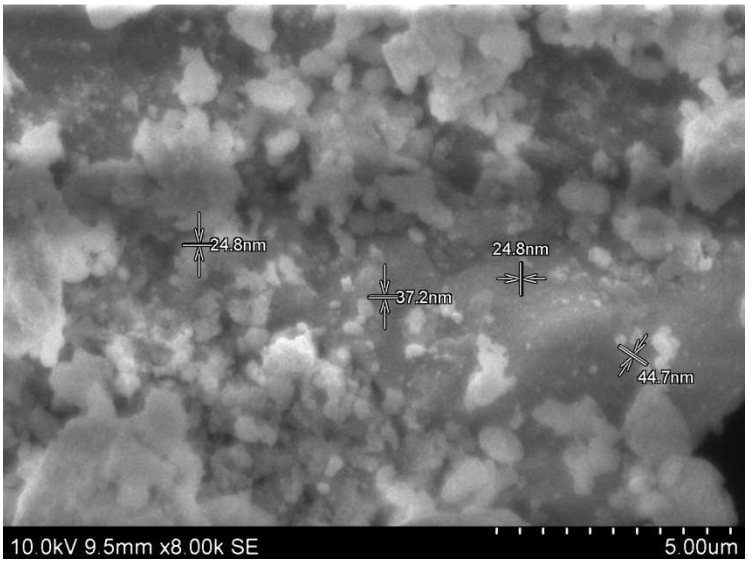
***Acute oral toxicity study:***

*VC at the dose of 2000mg/kg/po did not exhibit mortality in rats. As per the OECD guidelines substances do not exhibit mortality at the dose of 2000mg/kg/po are rated as "unclassified "in the toxicity scale.*

***Repeated oral toxicity for 28 days:***

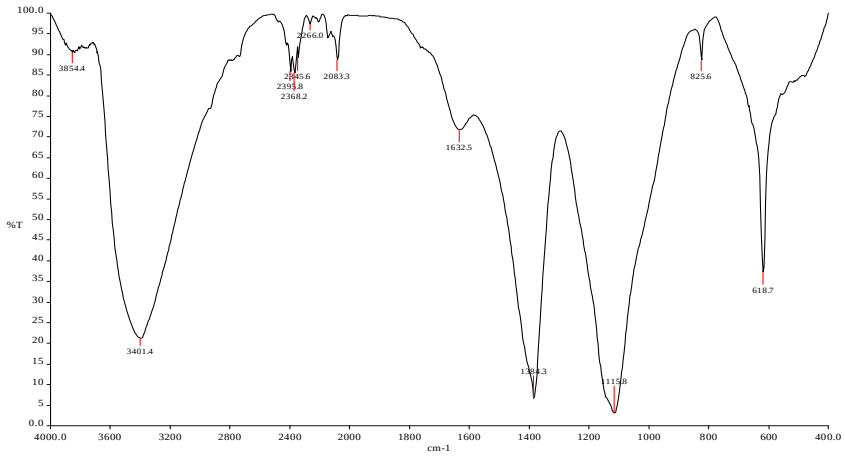
*Test drug VC at the dose of 25mg/kg/po when administered orally for 28 days in rats did not show significant toxicity in Hematological and liver function tests (Tables, 1 and 2) briefed before. However the drug exhibited significant elevation of serum creatinine level (Table 2- briefed before).*

## *S E M – PICTURE OF VEDIUPPU CHENDHURAM:*




*The SEM images of the Vedippu Chendhuram showed a small particles embedded on a stone like material. The structure of the particle is not uniform in shape. The average particle size is approximately 33 nm.*

## *FTIR - SPECTRUM OF VEDIUPPU CHENDHURAM*




***Vediuppu Chendhuram 30.10.12.pk***

***~1.SP 3601 4000.0 400.0 3.1 100.0 4.0 %T 4 2.0***

***PT***

***REF 4000 99.8 2000 99.5 600***

***3854.4 90.4 3401.4 21.2 2395.8 85.9 2368.2 85.6 2345.6 89.1***

***2266.0 97.4 2083.3 88.7 1632.5 71.7 1384.3 6.6 1115.8 3.1***

***825.6 88.5 618.7 37.2***

***END 12 PEAK(S) FOUND***

*An olefinic bond showed weak absorption band at 1632 and 825 cm-1 indicating the presence of unsaturation compounds such as alkene. Because of moisture the strong O-H peak (hydroxyl group) obtained at 3401 cm-1. The peak at 1384 cm-1 represents the presence of alkane group in the compound. The peak of 618 corresponds to the halide group. The presence of carboxylate group (– COO –) in the compound is indicated by the peak at 1115 cm-1 . The peak at 2266 cm-1 represent the presence of alkyene group. Above results indicates the presence of maximum number of organic group in our materials.*

***INDUCTIVELY COUPLED PLASMA OPTIC EMISSION SPECTROSCOPY (ICP – OES):***

*The result of ICP –OES revealed the absence of toxic elements like Arsenic,Cadmium,,Mercury,lead and the presence of Potassium(526.184mg/L)Which improves the functional efficacy of kidney and suppresses the calcium excretion in the urine and minimize the risk of kidney stone formation.*

***Statistical analysis:***

*The effect of the drug in treating Urolithiasis is analysed and interpreted by student's parity test ('t' test). P value less than 0.05 were considered as significant.*

| ***SAMPLE ID*** | ***ANALYTE*** | ***MEAN*** |
|---|---|---|
| *Vediuppu Chendhuram* | *As193.696* | *BDL* |
| | *B 249.773* | *02.286* |
| | *Cd 226.502* | *mg/L BDL* |
| | *Cu 324.754* | *04.836 mg/L* |
| | *Co 228.616* | *02.284 mg/L* |
| | *Fe 238.204* | *14.158 mg/L* |
| | *Hg253.652* | *BDL* |
| | *K 766.490* | *526.184 mg/L* |
| | *Ni 58.693* | *BDL* |
| | *Pb 230.204* | *BDL* |
| | *Sb 206.833* | *12.184 mg/L* |
| | *Si 251.611* | *14.284 mg/L* |
| | *Zn 213.856* | *15.127 mg/L* |
| *BDL – Below Detection Limit* | | |

# HISTO PATHOLOGICAL SLIDE

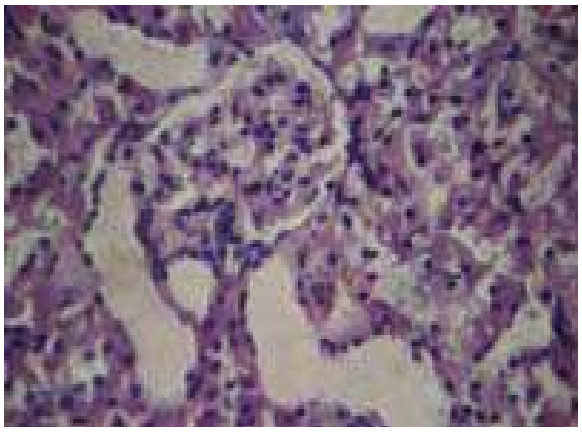


Plate-1 Normal control animal (kidney section)

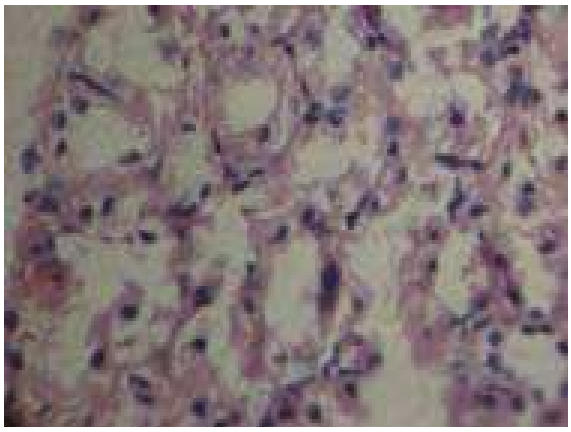


Plate-2 Animals treated with EG x 28 days (kidney section)

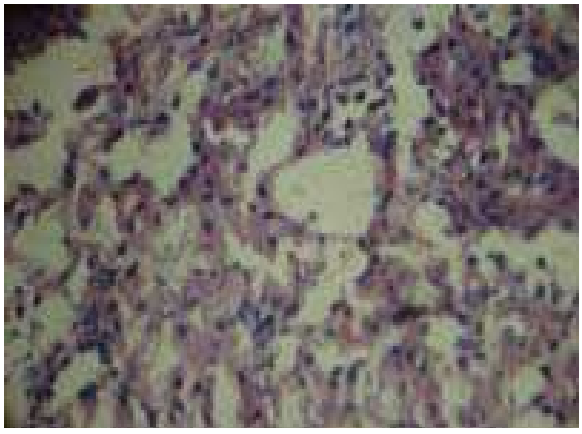


Plate-3 Animals treated with EG + Cystone for 28 days(kidney section)

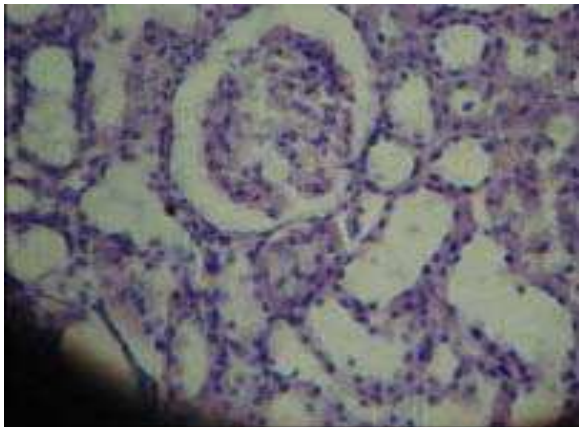


Plate-4 Animals treted with EG+VC for 28days(kidney section)

## *SUMMARY*

*The study is to evaluate the efficacy of the herbo mineral drug Vediuppu Chendhuram given in the Siddha text, Kannusamy Parambarai Vaithyam (Pg. No. 371) for Lithotriptic, diuretic and anti-spasmodic activity.*

*A review of literature about the Vediuppu and its significants in the Gunapadam aspect has been done.*

*Biochemical analysis shows the presence of ferric iron, sulphate, calcium, chloride, ferrous iron.*

*Pharmacological analysis shows that the drug has got significant lithotriptic, diuretic and anti-spasmodic activity. After the above evaluation the Vediuppu chendhuram is subjected to clinical trail.*

*The open clinical trial results that 77.50% of patients were having Good improvement and 17.50% were having the Fair improvements.*

*From the pre-clinical and clinical observation, it is inferred that the Vedipuppu chendhuram has got significant effect on Urolithiasis.*

## *CONCLUSION*

*Vediuppu Chendhuram was selected for the elaborate study of its efficacy on Urolithiasis.*

*From the literature review physico-chemical, pharmacological, microbiological, biochemical, instrumental analysis, it has been concluded that Vediuppu chendhuram has got a good Lithotriptic, diuretic and anti-spasmodic activities and hence effective for Urolithiasis.*

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9. சாம்பசிவம் பிள்ளை அகராதி
10. பதார்த்த குண விளக்கம்
11. தேரையர் வைத்தியம் - 1000
12. நோய்களுக்கு சித்த பரிகாரம்
13. பிரம்மமுனி வைத்திய சூத்திரம்
14. சித்த வைத்தியத் திரட்டு
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18. பதார்த்த குண சிந்தாமணி, நோயில்லா நெறி,
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20. நோய்நாடல் நோய் முதல் நாடல்
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23. பிராண ரக்ஷாமிர்த சிந்து
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26. அனுபோக வைத்திய நவநீதம் பாகம் - III
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REF BOOK : PATHARTHA GUNA VILAKAM

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| DRUG: VEDIUPPU CHENDHURAM | DIAGNOSIS: KALLADAIPPU |
|---|---|

| O.P No: 38818 | NAME: Mr. Palpandi | AGE/SEX: 25 / M | FROM: 24.05.2012 | TO: 05.07.2012 |
|---|---|---|---|---|
| COMPAINTS AND DURATION: Loin pain, burning micturition, Haematuria since 7 days | | | | |
| INVESTIGATIONS | | | | |
| BEFORE TREATMENT | | | AFTER TREATMENT | | |
| BLOOD | URINE | ULTRASONOGRAM - ABDOMEN | BLOOD | URINE | ULTRASONOGRAM - ABDOMEN |
| TC: 9200 cells | ALBUMIN: NIL | RIGHT KIDNEY: Normal | TC: 9200 cells / cum | ALBUMIN: NIL | RIGHT KIDNEY: Normal |
| DC: | SUGAR: NIL | | DC: | SUGAR: NIL | |
| P: 65% | DEPOSITS: | LEFT KIDNEY: A calculi size of 4 mm seen | P: 65% | DEPOSITS: | LEFT KIDNEY: Normal, No calculus |
| L: 34% | Few RBC cells | | L: 32% | NAD | |
| E: 1% | | UB: Normal | E: 3% | | UB: Normal |
| ESR: ½ hr – 5 mm<br>ESR: 1 hr – 11 mm | | | ESR: ½ hr – 5 mm<br>ESR: 1 hr – 9 mm | | |
| Hb: 80% | | IMPRESSION: Lt Renel Calculus | Hb: 80% | | IMPRESSION: Normal study<br>OBSERVATION: Good Response |
| SUGAR: 71 mgs% | | | SUGAR: 92 mgs% | | |
| UREA: 19 mgs% | | | UREA: 16 mgs% | | |

| O.P No: 40681 | NAME: Mr. Syed | AGE/SEX: 27 / M | FROM: 31.05.2012 | TO: 12.07.2012 |
|---|---|---|---|---|
| COMPAINTS AND DURATION: Loin pain, burning micturition since 1 month | | | | |
| INVESTIGATIONS | | | | |
| BEFORE TREATMENT | | | AFTER TREATMENT | | |
| BLOOD | URINE | ULTRASONOGRAM - ABDOMEN | BLOOD | URINE | ULTRASONOGRAM - ABDOMEN |
| TC: 7600 cells/cum | ALBUMIN: NIL | RIGHT KIDNEY: 5.9 mm calculus is seen | TC: 7700 cells/cum | ALBUMIN: NIL | RIGHT KIDNEY: Normal |
| DC: | SUGAR: NIL | | DC: | SUGAR: NIL | |
| P:58% | DEPOSITS: | LEFT KIDNEY: 5.9 mm calculus is seen | P: 60% | DEPOSITS: | LEFT KIDNEY: Normal |
| L: 38% | NAD | | L: 38% | NAD | |
| E: 4% | | UB: Normal | E: 2% | | UB: Normal |
| ESR: ½ hr – 2 mm<br>ESR: 1 hr – 4 mm | | | ESR: ½ hr – 2 mm<br>ESR: 1 hr – 4 mm | | |
| Hb: 72 mgs% | | IMPRESSION: Rt Renel calculus and Uretric Calculus | Hb: 72 mgs% | | IMPRESSION: Normal study<br>OBSERVATION: Good response |
| SUGAR: 104 mgs% | | | SUGAR: 79 mgs% | | |
| UREA: 22 mgs% | | | UREA: 22 mgs% | | |

| DRUG: VEDIUPPU CHENDHURAM | DIAGNOSIS: KALLADAIPPU |
|---|---|

| O.P No: 40805 | NAME: Mr. Syed Ali | AGE/SEX: 26 / M | FROM: 31.05.2012 | TO: 12.07.2012 |
|---|---|---|---|---|
| COMPAINTS AND DURATION: Loin pain, burning micturition, low back pain for the past one month | | | | |
| INVESTIGATIONS | | | | |
| BEFORE TREATMENT | | | AFTER TREATMENT | | |
| BLOOD | URINE | ULTRASONOGRAM - ABDOMEN | BLOOD | URINE | ULTRASONOGRAM - ABDOMEN |
| TC: 9300 cells | ALBUMIN: NIL | RIGHT KIDNEY: A calculus size of 3.3 mm is seen | TC: 9300 cells / cum | ALBUMIN: NIL | RIGHT KIDNEY: Normal. No calculus seen. |
| DC: | SUGAR: NIL | | DC: | SUGAR: NIL | |
| P: 69% | DEPOSITS: | LEFT KIDNEY: Normal | P: 65% | DEPOSITS: | LEFT KIDNEY: Normal |
| L: 29% | NAD | | L: 34% | NAD | |
| E: 2% | | UB: wall thickened | E: 1% | | UB: Normal |
| ESR: ½ hr – 5 mm<br>ESR: 1 hr – 10 mm | | | ESR: ½ hr – 4 mm<br>ESR: 1 hr – 8 mm | | |
| Hb: 82% | | IMPRESSION: Rt Renel Calculus | Hb: 82% | | IMPRESSION: Normal study<br>OBSERVATION: Good Response |
| SUGAR: 111 mgs% | | | SUGAR: 92 mgs% | | |
| UREA: 18 mgs% | | | UREA: 18 mgs% | | |

| O.P No: 41262 | NAME: Mr. Jeyaram | AGE/SEX: 29 / M | FROM: 02.06.2012 | TO: 07.07.2012 |
|---|---|---|---|---|
| COMPAINTS AND DURATION: Loin pain, burning micturition since 10 days | | | | |
| INVESTIGATIONS | | | | |
| BEFORE TREATMENT | | | AFTER TREATMENT | | |
| BLOOD | URINE | ULTRASONOGRAM - ABDOMEN | BLOOD | URINE | ULTRASONOGRAM - ABDOMEN |
| TC: 6900 cells/cum | ALBUMIN: NIL | RIGHT KIDNEY: Normal | TC: 6700 cells/cum | ALBUMIN: NIL | RIGHT KIDNEY: Normal |
| DC: | SUGAR: NIL | | DC: | SUGAR: NIL | |
| P:58% | DEPOSITS: | LEFT KIDNEY: 10.2 mm calculus is seen | P: 60% | DEPOSITS: | LEFT KIDNEY: A calculus of 5 mm is seen |
| L: 36% | 5-7 pus cells | | L: 38% | NAD | |
| E: 6% | | UB: Normal | E: 2% | | UB: Normal |
| ESR: ½ hr – 15 mm<br>ESR: 1 hr – 30 mm | | | ESR: ½ hr –10 mm<br>ESR: 1 hr – 20 mm | | |
| Hb: 65 mgs% | | IMPRESSION: Lt Renel calculus | Hb: 65 mgs% | | IMPRESSION: Normal study<br>OBSERVATION: Fair response |
| SUGAR: 101 mgs% | | | SUGAR: 89 mgs% | | |
| UREA: 191 mgs% | | | UREA: 18 mgs% | | |

| DRUG: VEDIUPPU CHENDHURAM | DIAGNOSIS: KALLADAIPPU |
|---|---|

| O.P No: 42496 | NAME: Mr. Ramachandran | AGE/SEX: 45 / M | FROM: 07.06.2012 | TO: 19.07.2012 |
|---|---|---|---|---|
| COMPAINTS AND DURATION: Loin pain to groin pain, burning micturition for the past 15 days | | | | |
| INVESTIGATIONS | | | | |
| BEFORE TREATMENT | | | AFTER TREATMENT | | |
| BLOOD | URINE | ULTRASONOGRAM - ABDOMEN | BLOOD | URINE | ULTRASONOGRAM - ABDOMEN |
| TC: 8700 cells | ALBUMIN: NIL | RIGHT KIDNEY: A calculus size of 14 mm is seen | TC: 8800 cells / cum | ALBUMIN: NIL | RIGHT KIDNEY: A calculus size of 8 mm is seen |
| DC: | SUGAR: NIL | | DC: | SUGAR: NIL | |
| P: 65% | DEPOSITS: | LEFT KIDNEY: Normal | P: 67% | DEPOSITS: | LEFT KIDNEY: Normal |
| L: 32% | 1-5 pus cells | | L: 30% | NAD | |
| E: 3% | | UB: Normal | E: 2% | | UB: Normal |
| ESR: ½ hr – 10 mm<br>ESR: 1 hr – 20 mm | | | ESR: ½ hr – 8 mm<br>ESR: 1 hr – 16 mm | | |
| Hb: 81% | | IMPRESSION: UC | Hb: 82% | | IMPRESSION: UC<br>OBSERVATION: Fair Response |
| SUGAR: 96 mgs% | | | SUGAR: 111 mgs% | | |
| UREA: 19 mgs% | | | UREA: 17 mgs% | | |

| O.P No: 42640 | NAME: Mr. Mohideen Badusha | AGE/SEX: 50 / M | FROM: 08.06.2012 | TO: 20.08.2012 |
|---|---|---|---|---|
| COMPAINTS AND DURATION: Abdominal pain, burning micturition since 10 days | | | | |
| INVESTIGATIONS | | | | |
| BEFORE TREATMENT | | | AFTER TREATMENT | | |
| BLOOD | URINE | ULTRASONOGRAM - ABDOMEN | BLOOD | URINE | ULTRASONOGRAM - ABDOMEN |
| TC: 7200 cells/cum | ALBUMIN: NIL | RIGHT KIDNEY: Normal | TC: 7200 cells/cum | ALBUMIN: NIL | RIGHT KIDNEY: Normal |
| DC: | SUGAR: NIL | | DC: | SUGAR: NIL | |
| P:62% | DEPOSITS: | LEFT KIDNEY: 3 mm calculus is seen | P: 62% | DEPOSITS: | LEFT KIDNEY: Normal |
| L: 34% | NAD | | L: 34% | NAD | |
| E: 4% | | UB: Normal | E: 4% | | UB: Normal |
| ESR: ½ hr – 20 mm<br>ESR: 1 hr – 40 mm | | | ESR: ½ hr –15 mm<br>ESR: 1 hr – 30 mm | | |
| Hb: 70 mgs% | | IMPRESSION: Lt UC | Hb: 70 mgs% | | IMPRESSION: Normal study<br>OBSERVATION: Good response |
| SUGAR: 79 mgs% | | | SUGAR: 82 mgs% | | |
| UREA: 15 mgs% | | | UREA: 15 mgs% | | |

| DRUG: VEDIUPPU CHENDHURAM | DIAGNOSIS: KALLADAIPPU |
|---|---|

| O.P No: 42441 | NAME: Mr. Boothapandi | AGE/SEX: 58 / M | FROM: 07.06.2012 | TO: 12.07.2012 |
|---|---|---|---|---|
| COMPAINTS AND DURATION: Loin pain and radiating to groin, pain and burning during micturition | | | | |

| INVESTIGATIONS | | | | | |
|---|---|---|---|---|---|
| BEFORE TREATMENT | | | AFTER TREATMENT | | |
| BLOOD | URINE | ULTRASONOGRAM - ABDOMEN | BLOOD | URINE | ULTRASONOGRAM - ABDOMEN |
| TC: 6700 cells | ALBUMIN: Trace | RIGHT KIDNEY: A calculus size of 9 mm is seen | TC: 6800 cells / cum | ALBUMIN: NIL | RIGHT KIDNEY: Normal. No calculus seen. |
| DC: | SUGAR: + | | DC: | SUGAR: + | |
| P: 60% | DEPOSITS: | LEFT KIDNEY: A calculus size of 9 mm is seen | P: 61% | DEPOSITS: | LEFT KIDNEY: Normal. No calculus seen. |
| L: 32% | 1-2 pus cells | | L: 32% | NAD | |
| E: 8% | | UB: Normal | E: 7% | | UB: Normal |
| ESR: ½ hr – 9 mm<br>ESR: 1 hr – 18 mm | | | ESR: ½ hr – 6 mm<br>ESR: 1 hr – 12 mm | | |
| Hb: 62% | | IMPRESSION: Rt & Lt Renel Calculus and UC | Hb: 62% | | IMPRESSION: Normal study<br>OBSERVATION: Good Response |
| SUGAR: 190 mgs% | | | SUGAR: 289 mgs% | | |
| UREA: 16 mgs% | | | UREA: 16 mgs% | | |

| O.P No: 48385 | NAME: Mr. Raj | AGE/SEX: 50 / M | FROM: 28.06.2012 | TO: 09.08.2012 |
|---|---|---|---|---|
| COMPAINTS AND DURATION: Pain in loin and radiating towards groin | | | | |

| INVESTIGATIONS | | | | | |
|---|---|---|---|---|---|
| BEFORE TREATMENT | | | AFTER TREATMENT | | |
| BLOOD | URINE | ULTRASONOGRAM - ABDOMEN | BLOOD | URINE | ULTRASONOGRAM - ABDOMEN |
| TC: 8800 cells/cum | ALBUMIN: NIL | RIGHT KIDNEY: Normal | TC: 8800 cells/cum | ALBUMIN: NIL | RIGHT KIDNEY: Normal |
| DC: | SUGAR: NIL | | DC: | SUGAR: NIL | |
| P:62% | DEPOSITS: | LEFT KIDNEY: 7 mm calculus is seen | P: 62% | DEPOSITS: | LEFT KIDNEY: Normal. No calculus seen. |
| L: 32% | NAD | | L: 34% | NAD | |
| E: 6% | | UB: Normal | E: 4% | | UB: Normal |
| ESR: ½ hr – 4 mm<br>ESR: 1 hr – 8 mm | | | ESR: ½ hr –4 mm<br>ESR: 1 hr – 7 mm | | |
| Hb: 87% | | IMPRESSION: Lt Renel calculus | Hb: 87% | | IMPRESSION: Normal study<br>OBSERVATION: Good response |
| SUGAR: 78 mgs% | | | SUGAR: 90 mgs% | | |
| UREA: 17 mgs% | | | UREA: 16 mgs% | | |

| DRUG: VEDIUPPU CHENDHURAM | DIAGNOSIS: KALLADAIPPU |
|---|---|

| O.P No: 51713 | NAME: Mrs. Alagumayil | AGE/SEX: 50 / F | FROM: 09.07.2012 | TO: 06.08.2012 |
|---|---|---|---|---|
| COMPAINTS AND DURATION: Pain in left groin, burning micturition since 3 months | | | | |
| INVESTIGATIONS | | | | |
| BEFORE TREATMENT | | | AFTER TREATMENT | | |
| BLOOD | URINE | ULTRASONOGRAM - ABDOMEN | BLOOD | URINE | ULTRASONOGRAM – ABDOMEN |
| TC: 7800 cells | ALBUMIN: Trace | RIGHT KIDNEY: Normal | TC: 8000 cells / cum | ALBUMIN: NIL | RIGHT KIDNEY: Normal |
| DC: | SUGAR: NIL | | DC: | SUGAR: NIL | |
| P: 62% | DEPOSITS: | LEFT KIDNEY: A calculi size of 6.6 mm seen | P: 62% | DEPOSITS: | LEFT KIDNEY: A calculi size of 2 mm seen |
| L: 33% | 3-7 pus cells | | L: 32% | NAD | |
| E: 5% | | UB: Normal | E: 6% | | UB: Normal |
| ESR: ½ hr – 10 mm<br>ESR: 1 hr – 20 mm | | | ESR: ½ hr – 8 mm<br>ESR: 1 hr – 16 mm | | |
| Hb: 79% | | IMPRESSION: Lt Renel Calculus | Hb: 78% | | IMPRESSION: Normal study<br>OBSERVATION: Good Response |
| SUGAR: 82 mgs% | | | SUGAR: 98 mgs% | | |
| UREA: 20 mgs% | | | UREA: 19 mgs% | | |

| O.P No: 54512 | NAME: Mr. Selvakumar | AGE/SEX: 40 / M | FROM: 19.07.2012 | TO: 30.08.2012 |
|---|---|---|---|---|
| COMPAINTS AND DURATION: Pain in both the loins since 45 days | | | | |
| INVESTIGATIONS | | | | |
| BEFORE TREATMENT | | | AFTER TREATMENT | | |
| BLOOD | URINE | ULTRASONOGRAM – ABDOMEN | BLOOD | URINE | ULTRASONOGRAM - ABDOMEN |
| TC: 7500 cells/cum | ALBUMIN: Trace | RIGHT KIDNEY: 4 mm calculus is seen | TC: 7600 cells/cum | ALBUMIN: NIL | RIGHT KIDNEY: Normal |
| DC: | SUGAR: ++ | | DC: | SUGAR: NIL | |
| P:60% | DEPOSITS: | LEFT KIDNEY: 4 mm calculus is seen | P: 62% | DEPOSITS: | LEFT KIDNEY: Normal |
| L: 33% | 10-12 pus cells | | L: 33% | NAD | |
| E: 7% | | UB: Normal | E: 5% | | UB: Normal |
| ESR: ½ hr – 10 mm<br>ESR: 1 hr – 20 mm | | | ESR: ½ hr – 6 mm<br>ESR: 1 hr – 12 mm | | |
| Hb: 75% | | IMPRESSION: Rt & Lt Renel calculus | Hb: 76% | | IMPRESSION: Normal study<br>OBSERVATION: Good response |
| SUGAR: 252 mgs% | | | SUGAR: 203 mgs% | | |
| UREA: 22 mgs% | | | UREA: 21 mgs% | | |

| DRUG: VEDIUPPU CHENDHURAM | DIAGNOSIS: KALLADAIPPU |
|---|---|

| O.P No: 54609 | NAME: Mr. Ganesan | AGE/SEX: 43 / M | FROM: 19.07.2012 | TO: 30.08.2012 |
|---|---|---|---|---|
| COMPAINTS AND DURATION: Pain in loin radiating towards groin since a week | | | | |
| INVESTIGATIONS | | | | |
| BEFORE TREATMENT | | | AFTER TREATMENT | |
| BLOOD | URINE | ULTRASONOGRAM - ABDOMEN | BLOOD | URINE | ULTRASONOGRAM – ABDOMEN |
| TC: 8600 cells | ALBUMIN: NIL | RIGHT KIDNEY: Normal | TC: 8700 cells / cum | ALBUMIN: NIL | RIGHT KIDNEY: Normal |
| DC: | SUGAR: NIL | | DC: | SUGAR: NIL | |
| P: 67% | DEPOSITS: | LEFT KIDNEY: A calculi size of 4 mm seen | P: 65% | DEPOSITS: | LEFT KIDNEY: Normal, No calculus |
| L: 30% | Few 2-3 pus cells | | L: 32% | NAD | |
| E: 3% | | UB: Normal | E: 3% | | UB: Normal |
| ESR: ½ hr – 6 mm<br>ESR: 1 hr – 12 mm | | | ESR: ½ hr – 7 mm<br>ESR: 1 hr – 12 mm | | |
| Hb: 86% | | IMPRESSION: Lt Renel Calculus | Hb: 86% | | IMPRESSION: Normal study<br>OBSERVATION: Good Response |
| SUGAR: 122 mgs% | | | SUGAR: 72 mgs% | | |
| UREA: 17 mgs% | | | UREA: 17 mgs% | | |

| O.P No: 55709 | NAME: Mr. Murugaiah | AGE/SEX: 38 / M | FROM: 23.07.2012 | TO: 20.08.2012 |
|---|---|---|---|---|
| COMPAINTS AND DURATION: Loin pain, burning micturition | | | | |
| INVESTIGATIONS | | | | |
| BEFORE TREATMENT | | | AFTER TREATMENT | |
| BLOOD | URINE | ULTRASONOGRAM - ABDOMEN | BLOOD | URINE | ULTRASONOGRAM - ABDOMEN |
| TC: 9000 cells/cum | ALBUMIN: NIL | RIGHT KIDNEY: 5.3 mm calculus is seen | TC: 9100 cells/cum | ALBUMIN: NIL | RIGHT KIDNEY: Normal, no calculus seen |
| DC: | SUGAR: NIL | | DC: | SUGAR: NIL | |
| P:68% | DEPOSITS: | LEFT KIDNEY: Normal | P: 67% | DEPOSITS: | LEFT KIDNEY: Normal |
| L: 31% | NAD | | L: 32% | NAD | |
| E: 1% | | UB: Normal | E: 1% | | UB: Normal |
| ESR: ½ hr – 3 mm<br>ESR: 1 hr – 7 mm | | | ESR: ½ hr – 4 mm<br>ESR: 1 hr – 6 mm | | |
| Hb: 80 mgs% | | IMPRESSION: Rt Renel calculus and Uretric Calculus | Hb: 80% | | IMPRESSION: Normal study<br>OBSERVATION: Good response |
| SUGAR: 86 mgs% | | | SUGAR: 112 mgs% | | |
| UREA: 19 mgs% | | | UREA: 19 mgs% | | |

| DRUG: VEDIUPPU CHENDHURAM | DIAGNOSIS: KALLADAIPPU |
|---|---|

| O.P No: 56626 | NAME: Mr. Sudalaimani | AGE/SEX: 68 / M | FROM: 26.07.2012 | TO: 30.08.2012 |
|---|---|---|---|---|

**COMPAINTS AND DURATION: Burning micturition, low back pain since 2 months**

**INVESTIGATIONS**

| BEFORE TREATMENT | | | AFTER TREATMENT | | |
|---|---|---|---|---|---|
| BLOOD | URINE | ULTRASONOGRAM - ABDOMEN | BLOOD | URINE | ULTRASONOGRAM – ABDOMEN |
| TC: 7700 cells | ALBUMIN: Trace | RIGHT KIDNEY: A calculi size of 14.8 mm seen | TC: 7800 cells / cum | ALBUMIN: NIL | RIGHT KIDNEY: A calculi size of 8 mm seen |
| DC: | SUGAR: NIL | | DC: | SUGAR: NIL | |
| P: 64% | DEPOSITS: | LEFT KIDNEY: Normal | P: 64% | DEPOSITS: | LEFT KIDNEY: Normal |
| L: 34% | 5-10 pus cells | | L: 34% | NAD | |
| E: 2% | | UB: Normal | E: 2% | | UB: Normal |
| ESR: ½ hr – 16 mm<br>ESR: 1 hr – 30 mm | | | ESR: ½ hr – 10 mm<br>ESR: 1 hr – 20 mm | | |
| Hb: 76% | | IMPRESSION: Rt Renel Calculus | Hb: 76% | | IMPRESSION: Normal study<br>OBSERVATION: Fair Response |
| SUGAR: 92 mgs% | | | SUGAR: 77 mgs% | | |
| UREA: 21 mgs% | | | UREA: 20 mgs% | | |

| O.P No: 56732 | NAME: Mr. Ravishankar | AGE/SEX: 40 / M | FROM: 26.07.2012 | TO: 30.08.2012 |
|---|---|---|---|---|

**COMPAINTS AND DURATION: Loin pain, burning micturition**

**INVESTIGATIONS**

| BEFORE TREATMENT | | | AFTER TREATMENT | | |
|---|---|---|---|---|---|
| BLOOD | URINE | ULTRASONOGRAM - ABDOMEN | BLOOD | URINE | ULTRASONOGRAM - ABDOMEN |
| TC: 9200 cells/cum | ALBUMIN: Trace | RIGHT KIDNEY: 4 mm calculus is seen | TC: 9200 cells/cum | ALBUMIN: NIL | RIGHT KIDNEY: Normal |
| DC: | SUGAR: NIL | | DC: | SUGAR: NIL | |
| P:62% | DEPOSITS: | LEFT KIDNEY: 4 mm calculus is seen | P: 64% | DEPOSITS: | LEFT KIDNEY: Normal |
| L: 30% | 10-15 pus cells | | L: 32% | NAD | |
| E: 8% | | UB: Normal | E: 4% | | UB: Normal |
| ESR: ½ hr – 5 mm<br>ESR: 1 hr – 10 mm | | | ESR: ½ hr – 4 mm<br>ESR: 1 hr – 8 mm | | |
| Hb: 82% | | IMPRESSION: Bilateral Renel calculus | Hb: 72 mgs% | | IMPRESSION: Normal study<br>OBSERVATION: Good response |
| SUGAR: 91 mgs% | | | SUGAR: 79 mgs% | | |
| UREA: 24 mgs% | | | UREA: 22 mgs% | | |

***DRUG: VEDIUPPU CHENDHURAM*** ***DIAGNOSIS: KALLADIPPU***

| ***O.P No: 57766*** | ***NAME: Mr.Mohideenpitchai*** | ***AGE/SEX: 58 / M*** | ***FROM: 30.07.2012*** | ***TO: 03.09.2012*** |
|---|---|---|---|---|
| ***COMPAINTS AND DURATION: Loin pain radiating to groin, burning micturition*** | | | | |
| ***INVESTIGATIONS*** | | | | |
| ***BEFORE TREATMENT*** | | | ***AFTER TREATMENT*** | |
| ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** | ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM – ABDOMEN*** |
| ***TC: 7900 cells*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: A calculi size of 3.7 mm seen*** | ***TC: 8100 cells / cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: Normal, No calculus*** |
| ***DC:*** | ***SUGAR: NIL*** | | ***DC:*** | ***SUGAR: NIL*** | |
| ***P: 65%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal*** | ***P: 63%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal*** |
| ***L: 32%*** | ***1-5 pus cells*** | | ***L: 35%*** | ***NAD*** | |
| ***E: 3%*** | | ***UB: Normal*** | ***E: 2%*** | | ***UB: Normal*** |
| ***ESR: ½ hr – 5 mm***<br>***ESR: 1 hr – 11 mm*** | | | ***ESR: ½ hr – 4 mm***<br>***ESR: 1 hr – 9 mm*** | | |
| ***Hb: 74%*** | | ***IMPRESSION: Rt Renel Calculus*** | ***Hb: 74%*** | | ***IMPRESSION: Normal study***<br>***OBSERVATION: Good Response*** |
| ***SUGAR: 96 mgs%*** | | | ***SUGAR: 100 mgs%*** | | |
| ***UREA: 17 mgs%*** | | | ***UREA: 160 mgs%*** | | |

| ***O.P No: 58727*** | ***NAME: Mr. Thandapani*** | ***AGE/SEX: 50 / M*** | ***FROM: 02.08.2012*** | ***TO: 06.09.2012*** |
|---|---|---|---|---|
| ***COMPAINTS AND DURATION: Loin pain radiating towards groin in both sides for the past 6 months*** | | | | |
| ***INVESTIGATIONS*** | | | | |
| ***BEFORE TREATMENT*** | | | ***AFTER TREATMENT*** | |
| ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** | ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** |
| ***TC: 7700 cells/cum*** | ***ALBUMIN: Trace*** | ***RIGHT KIDNEY: 6.2 mm calculus is seen*** | ***TC: 7900 cells/cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: 3.1 mm calculus is seen*** |
| ***DC:*** | ***SUGAR: NIL*** | | ***DC:*** | ***SUGAR: NIL*** | |
| ***P: 60%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: 6.2 mm calculus is seen*** | ***P: 60%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: 3.1 mm calculus is seen*** |
| ***L: 38%*** | ***5-8 pus cells*** | | ***L: 39%*** | ***NAD*** | |
| ***E: 3%*** | | ***UB: Normal*** | ***E: 1%*** | | ***UB: Normal*** |
| ***ESR: ½ hr – 3 mm***<br>***ESR: 1 hr – 6 mm*** | | | ***ESR: ½ hr – 4 mm***<br>***ESR: 1 hr – 8 mm*** | | |
| ***Hb: 74%*** | | ***IMPRESSION: Bilateral renel calculus*** | ***Hb: 75%*** | | ***IMPRESSION: Normal study***<br>***OBSERVATION: Fair response*** |
| ***SUGAR: 83 mgs%*** | | | ***SUGAR: 111 mgs%*** | | |
| ***UREA: 18 mgs%*** | | | ***UREA: 16 mgs%*** | | |

***DRUG: VEDIUPPU CHENDHURAM*** ***DIAGNOSIS: KALLADIPPU***

| ***O.P No: 60923*** | ***NAME: Mr. Mutharasu*** | ***AGE/SEX: 31 / M*** | ***FROM: 09.08.2012*** | ***TO: 13.09.2012*** |
|---|---|---|---|---|
| ***COMPAINTS AND DURATION: Loin pain radiating to groin, burning micturition since 4 months*** | | | | |
| ***INVESTIGATIONS*** | | | | |
| ***BEFORE TREATMENT*** | | | ***AFTER TREATMENT*** | |
| ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** | ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM – ABDOMEN*** |
| ***TC: 8300 cells*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: A calculi size of 5 mm seen*** | ***TC: 8300 cells / cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: Normal, No calculus*** |
| ***DC:*** | ***SUGAR: NIL*** | | ***DC:*** | ***SUGAR: NIL*** | |
| ***P: 65%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: A calculi size of 5 mm seen*** | ***P: 65%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal, No calculus*** |
| ***L: 32%*** | ***Few pus cells*** | | ***L: 33%*** | ***NAD*** | |
| ***E: 3%*** | | ***UB: Normal*** | ***E: 2%*** | | ***UB: Normal*** |
| ***ESR: ½ hr – 5 mm***<br>***ESR: 1 hr – 11 mm*** | | | ***ESR: ½ hr – 4 mm***<br>***ESR: 1 hr – 8 mm*** | | |
| ***Hb: 82%*** | | ***IMPRESSION: Bilateral Renel Calculus*** | ***Hb: 82%*** | | ***IMPRESSION: Normal study***<br>***OBSERVATION: Good Response*** |
| ***SUGAR: 111 mgs%*** | | | ***SUGAR: 99 mgs%*** | | |
| ***UREA: 16 mgs%*** | | | ***UREA: 16 mgs%*** | | |

| ***O.P No: 62867*** | ***NAME: Mr. Kanthan*** | ***AGE/SEX: 65 / M*** | ***FROM: 16.08.2012*** | ***TO: 27.09.2012*** |
|---|---|---|---|---|
| ***COMPAINTS AND DURATION: Difficulty in micturition, burning micturition, loin pain radiating to groin*** | | | | |
| ***INVESTIGATIONS*** | | | | |
| ***BEFORE TREATMENT*** | | | ***AFTER TREATMENT*** | |
| ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** | ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** |
| ***TC: 7900 cells/cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: 50 mm calculus is seen*** | ***TC: 7900 cells/cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: 50 mm calculus is seen*** |
| ***DC:*** | ***SUGAR: NIL*** | | ***DC:*** | ***SUGAR: NIL*** | |
| ***P:67%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal*** | ***P: 67%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal*** |
| ***L: 29%*** | ***NAD*** | | ***L: 29%*** | ***NAD*** | |
| ***E: 4%*** | | ***UB: Normal*** | ***E: 4%*** | | ***UB: Normal*** |
| ***ESR: ½ hr – 20 mm***<br>***ESR: 1 hr – 40 mm*** | | | ***ESR: ½ hr – 10 mm***<br>***ESR: 1 hr – 19 mm*** | | |
| ***Hb: 65%*** | | ***IMPRESSION: Rt Renel calculus*** | ***Hb: 65%*** | | ***IMPRESSION: Rt Renel calculus***<br>***OBSERVATION: Poor response*** |
| ***SUGAR: 180 mgs%*** | | | ***SUGAR: 78 mgs%*** | | |
| ***UREA: 20 mgs%*** | | | ***UREA: 20 mgs%*** | | |

***DRUG: VEDIUPPU CHENDHURAM*** ***DIAGNOSIS: KALLADAIPPU***

| ***O.P No: 63207*** | ***NAME: Mr. Krishnan*** | ***AGE/SEX: 42 / M*** | ***FROM: 17.08.2012*** | ***TO: 28.09.2012*** |
|---|---|---|---|---|
| ***COMPAINTS AND DURATION: Pain in both loin regions since 2 months*** | | | | |
| ***INVESTIGATIONS*** | | | | |
| ***BEFORE TREATMENT*** | | | ***AFTER TREATMENT*** | |
| ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** | ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM – ABDOMEN*** |
| ***TC: 8800 cells*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: A calculi size of 3 mm seen*** | ***TC: 8900 cells / cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: Normal, No calculus*** |
| ***DC:*** | ***SUGAR: NIL*** | | ***DC:*** | ***SUGAR: NIL*** | |
| ***P: 62%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: A calculi size of 3 mm seen*** | ***P: 62%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal, No calculus*** |
| ***L: 32%*** | ***NAD*** | | ***L: 34%*** | ***NAD*** | |
| ***E: 6%*** | | ***UB: Normal*** | ***E: 4%*** | | ***UB: Normal*** |
| ***ESR: ½ hr – 7 mm***<br>***ESR: 1 hr – 13 mm*** | | | ***ESR: ½ hr – 9 mm***<br>***ESR: 1 hr – 19 mm*** | | |
| ***Hb: 78%*** | | ***IMPRESSION: Bilateral Renel Calculus*** | ***Hb: 76%*** | | ***IMPRESSION: Normal study***<br>***OBSERVATION: Good Response*** |
| ***SUGAR: 150 mgs%*** | | | ***SUGAR: 96 mgs%*** | | |
| ***UREA: 19 mgs%*** | | | ***UREA: 18 mgs%*** | | |

| ***O.P No: 67274*** | ***NAME: Mr. Oli muthu*** | ***AGE/SEX: 30 / M*** | ***FROM: 31.08.2012*** | ***TO: 05.10.2012*** |
|---|---|---|---|---|
| ***COMPAINTS AND DURATION: Loin pain radiating to groin, burning micturition*** | | | | |
| ***INVESTIGATIONS*** | | | | |
| ***BEFORE TREATMENT*** | | | ***AFTER TREATMENT*** | |
| ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** | ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** |
| ***TC: 8800 cells/cum*** | ***ALBUMIN: Trace*** | ***RIGHT KIDNEY: 4 mm calculus is seen*** | ***TC: 8000 cells/cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: Normal*** |
| ***DC:*** | ***SUGAR: NIL*** | | ***DC:*** | ***SUGAR: NIL*** | |
| ***P:60%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal*** | ***P: 60%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal*** |
| ***L: 37%*** | ***Few pus cells*** | | ***L: 34%*** | ***NAD*** | |
| ***E: 3%*** | | ***UB: Normal*** | ***E: 6%*** | | ***UB: Normal*** |
| ***ESR: ½ hr – 10 mm***<br>***ESR: 1 hr – 22 mm*** | | | ***ESR: ½ hr – 10 mm***<br>***ESR: 1 hr – 20 mm*** | | |
| ***Hb: 65%*** | | ***IMPRESSION: Rt UC is seen*** | ***Hb: 65%*** | | ***IMPRESSION: Normal study***<br>***OBSERVATION: Good response*** |
| ***SUGAR: 97 mgs%*** | | | ***SUGAR: 92 mgs%*** | | |
| ***UREA: 22 mgs%*** | | | ***UREA: 22 mgs%*** | | |

***DRUG: VEDIUPPU CHENDHURAM*** ***DIAGNOSIS: KALLADAIPPU***

| ***O.P No: 67273*** | ***NAME:*** *Mr. Ananda perumal* | ***AGE/SEX: 21 / M*** | ***FROM: 31.08.2012*** | ***TO: 05.10.2012*** |
|---|---|---|---|---|
| ***COMPAINTS AND DURATION: Loin pain, burning micturition, Haematuria since 7 days*** | | | | |
| ***INVESTIGATIONS*** | | | | |
| ***BEFORE TREATMENT*** | | | ***AFTER TREATMENT*** | |
| ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** | ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM – ABDOMEN*** |
| ***TC: 8200 cells*** | ***ALBUMIN: Trace*** | ***RIGHT KIDNEY: A calculi size of 5 mm seen*** | ***TC: 8300 cells / cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: Normal, No calculus*** |
| ***DC:*** | ***SUGAR: NIL*** | | ***DC:*** | ***SUGAR: NIL*** | |
| ***P: 50%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal*** | ***P: 60%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal*** |
| ***L: 48%*** | ***3-4 Epi cells*** | | ***L: 38%*** | ***NAD*** | |
| ***E: 2%*** | | ***UB: Normal*** | ***E: 2%*** | | ***UB: Normal*** |
| ***ESR: ½ hr – 10 mm ESR: 1 hr – 20 mm*** | | | ***ESR: ½ hr – 12 mm ESR: 1 hr – 24 mm*** | | |
| ***Hb: 70%*** | | ***IMPRESSION: Rt Renel Calculus*** | ***Hb: 70%*** | | ***IMPRESSION: Normal study OBSERVATION: Good Response*** |
| ***SUGAR: 115 mgs%*** | | | ***SUGAR: 104 mgs%*** | | |
| ***UREA: 20 mgs%*** | | | ***UREA: 18 mgs%*** | | |

| ***O.P No: 67106*** | ***NAME: Mr. Iyyapan*** | ***AGE/SEX: 45 / M*** | ***FROM: 30.08.2012*** | ***TO: 04.10.2012*** |
|---|---|---|---|---|
| ***COMPAINTS AND DURATION: Loin pain, burning micturition since 20 days*** | | | | |
| ***INVESTIGATIONS*** | | | | |
| ***BEFORE TREATMENT*** | | | ***AFTER TREATMENT*** | |
| ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** | ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** |
| ***TC: 9100 cells/cum*** | ***ALBUMIN: Trace*** | ***RIGHT KIDNEY: 6 mm calculus is seen*** | ***TC: 9200 cells/cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: 2 mm calculus is seen*** |
| ***DC:*** | ***SUGAR: NIL*** | | ***DC:*** | ***SUGAR: NIL*** | |
| ***P:56%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: 6 mm calculus is seen*** | ***P: 56%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: 2 mm calculus is seen*** |
| ***L: 42%*** | ***NAD*** | | ***L: 41%*** | ***NAD*** | |
| ***E: 2%*** | | ***UB: Normal*** | ***E: 3%*** | | ***UB: Normal*** |
| ***ESR: ½ hr – 3 mm ESR: 1 hr – 6 mm*** | | | ***ESR: ½ hr – 3 mm ESR: 1 hr – 6 mm*** | | |
| ***Hb: 78%*** | | ***IMPRESSION: Bilateral Renel calculus*** | ***Hb: 78%*** | | ***IMPRESSION: Bilateral RC OBSERVATION: Fair response*** |
| ***SUGAR: 75 mgs%*** | | | ***SUGAR: 97 mgs%*** | | |
| ***UREA: 26 mgs%*** | | | ***UREA: 26 mgs%*** | | |

***DRUG: VEDIUPPU CHENDHURAM*** ***DIAGNOSIS: KALLADAIPPU***

| ***O.P No: 71801*** | ***NAME: Miss. Fathima*** | ***AGE/SEX: 21 / F*** | ***FROM: 13.09.2012*** | ***TO: 18.10.2012*** |
|---|---|---|---|---|
| ***COMPAINTS AND DURATION: Loin pain, burning micturition since 2 yrs*** | | | | |
| ***INVESTIGATIONS*** | | | | |
| ***BEFORE TREATMENT*** | | | ***AFTER TREATMENT*** | |
| ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** | ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM – ABDOMEN*** |
| ***TC: 8700 cells*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: Normal*** | ***TC: 8900 cells / cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: Normal*** |
| ***DC:*** | ***SUGAR: NIL*** | | ***DC:*** | ***SUGAR: NIL*** | |
| ***P: 50%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: A calculi size of 6 mm seen*** | ***P: 60%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal, No calculus*** |
| ***L: 48%*** | ***3-5 pus cells*** | | ***L: 38%*** | ***NAD*** | |
| ***E: 2%*** | | ***UB: Normal*** | ***E: 2%*** | | ***UB: Normal*** |
| ***ESR: ½ hr – 3 mm***<br>***ESR: 1 hr – 6 mm*** | | | ***ESR: ½ hr – 3 mm***<br>***ESR: 1 hr – 7 mm*** | | |
| ***Hb: 78%*** | | ***IMPRESSION: Lt Renel Calculus*** | ***Hb: 79%*** | | ***IMPRESSION: Normal study***<br>***OBSERVATION: Good Response*** |
| ***SUGAR: 75 mgs%*** | | | ***SUGAR: 80 mgs%*** | | |
| ***UREA: 26 mgs%*** | | | ***UREA: 20 mgs%*** | | |

| ***O.P No: 78333*** | ***NAME: Mrs. Gandhi*** | ***AGE/SEX: 37 / F*** | ***FROM: 03.10.2012*** | ***TO: 07.11.2012*** |
|---|---|---|---|---|
| ***COMPAINTS AND DURATION: Loin pain radiating to groin, burning micturition since 2 months*** | | | | |
| ***INVESTIGATIONS*** | | | | |
| ***BEFORE TREATMENT*** | | | ***AFTER TREATMENT*** | |
| ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** | ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** |
| ***TC: 9200 cells/cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: 7 mm calculus is seen*** | ***TC: 9300 cells/cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: 7 mm calculus is seen*** |
| ***DC:*** | ***SUGAR: NIL*** | | ***DC:*** | ***SUGAR: NIL*** | |
| ***P:48%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal*** | ***P: 56%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal*** |
| ***L: 48%*** | ***NAD*** | | ***L: 42%*** | ***NAD*** | |
| ***E: 2%*** | | ***UB: Normal*** | ***E: 2%*** | | ***UB: Normal*** |
| ***ESR: ½ hr – 16 mm***<br>***ESR: 1 hr – 32 mm*** | | | ***ESR: ½ hr – 10 mm***<br>***ESR: 1 hr – 20 mm*** | | |
| ***Hb: 78%*** | | ***IMPRESSION: Rt Urethral calculus*** | ***Hb: 79%*** | | ***IMPRESSION: Rt Urethral calculus***<br>***OBSERVATION: Poor response*** |
| ***SUGAR: 108 mgs%*** | | | ***SUGAR: 99 mgs%*** | | |
| ***UREA: 20 mgs%*** | | | ***UREA: 19 mgs%*** | | |

***DRUG: VEDIUPPU CHENDHURAM*** ***DIAGNOSIS: KALLADAIPPU***

| ***O.P No: 78800*** | ***NAME: Mr. Krishnan*** | ***AGE/SEX: 47 / M*** | ***FROM: 04.10.2012*** | ***TO: 08.11.2012*** |
|---|---|---|---|---|
| ***COMPAINTS AND DURATION: Loin pain radiating to groin, burning micturition*** | | | | |
| ***INVESTIGATIONS*** | | | | |
| ***BEFORE TREATMENT*** | | | ***AFTER TREATMENT*** | |
| ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** | ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM – ABDOMEN*** |
| ***TC: 8200 cells*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: A calculi size of 10 mm seen*** | ***TC: 8400 cells / cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: A calculi size of 3 mm seen*** |
| ***DC:*** | ***SUGAR: NIL*** | | ***DC:*** | ***SUGAR: NIL*** | |
| ***P: 62%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: A calculi size of 10 mm seen*** | ***P: 64%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: A calculi size of 3mm seen*** |
| ***L: 36%*** | ***5-10 pus cells*** | | ***L: 34%*** | ***NAD*** | |
| ***E: 2%*** | | ***UB: Normal*** | ***E: 2%*** | | ***UB: Normal*** |
| ***ESR: ½ hr – 12 mm***<br>***ESR: 1 hr – 24 mm*** | | | ***ESR: ½ hr – 15 mm***<br>***ESR: 1 hr – 30 mm*** | | |
| ***Hb: 64%*** | | ***IMPRESSION: Bilateral Renal Calculus*** | ***Hb: 80%*** | | ***IMPRESSION: Bilateral Renal Calculus***<br>***OBSERVATION: Fair Response*** |
| ***SUGAR: 110 mgs%*** | | | ***SUGAR: 92 mgs%*** | | |
| ***UREA: 25 mgs%*** | | | ***UREA: 16 mgs%*** | | |

| ***O.P No: 79352*** | ***NAME:*** ***Mr. Chokkalingam*** | ***AGE/SEX: 75 / M*** | ***FROM: 06.10.2012*** | ***TO: 10.11.2012*** |
|---|---|---|---|---|
| ***COMPAINTS AND DURATION: Loin pain in right region for 2 yrs, burning micturition*** | | | | |
| ***INVESTIGATIONS*** | | | | |
| ***BEFORE TREATMENT*** | | | ***AFTER TREATMENT*** | |
| ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** | ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** |
| ***TC: 9000 cells/cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: 4.8 mm calculus is seen*** | ***TC: 9200 cells/cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: Normal*** |
| ***DC:*** | ***SUGAR: NIL*** | | ***DC:*** | ***SUGAR: NIL*** | |
| ***P:60%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal*** | ***P: 62%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal*** |
| ***L: 36%*** | ***2-3 pus cells*** | | ***L: 34%*** | ***NAD*** | |
| ***E: 4%*** | | ***UB: Normal*** | ***E: 4%*** | | ***UB: Normal*** |
| ***ESR: ½ hr – 4 mm***<br>***ESR: 1 hr – 8 mm*** | | | ***ESR: ½ hr – 5 mm***<br>***ESR: 1 hr – 48 mm*** | | |
| ***Hb: 78%*** | | ***IMPRESSION: Rt Renel calculus*** | ***Hb: 79%*** | | ***IMPRESSION: Normal study***<br>***OBSERVATION: Good response*** |
| ***SUGAR: 96 mgs%*** | | | ***SUGAR: 100 mgs%*** | | |
| ***UREA: 22 mgs%*** | | | ***UREA: 20 mgs%*** | | |

***DRUG: VEDIUPPU CHENDHURAM*** ***DIAGNOSIS: KALLADAIPPU***

| ***O.P No: 84857*** | ***NAME: Mr.Murugesan*** | ***AGE/SEX: 38 / M*** | ***FROM: 24.10.2012*** | ***TO: 28.11.2012*** |
|---|---|---|---|---|
| ***COMPAINTS AND DURATION: Loin pain radiating to groin, burning micturition*** | | | | |
| ***INVESTIGATIONS*** | | | | |
| ***BEFORE TREATMENT*** | | | ***AFTER TREATMENT*** | |
| ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** | ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM – ABDOMEN*** |
| ***TC: 9100 cells*** | ***ALBUMIN: Trace*** | ***RIGHT KIDNEY: A calculi size of 4 mm seen*** | ***TC: 9200 cells / cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: Normal, no calculi seen*** |
| ***DC:*** | ***SUGAR: +*** | | ***DC:*** | ***SUGAR: NIL*** | |
| ***P: 55%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: A calculi size of 4 mm seen*** | ***P: 62%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal, no calculi seen*** |
| ***L: 42%*** | ***5-10 pus cells*** | | ***L: 35%*** | ***NAD*** | |
| ***E: 3%*** | | ***UB: Normal*** | ***E: 3%*** | | ***UB: Normal*** |
| ***ESR: ½ hr – 5 mm ESR: 1 hr – 11 mm*** | | | ***ESR: ½ hr – 8 mm ESR: 1 hr – 12 mm*** | | |
| ***Hb: 73%*** | | ***IMPRESSION: Bilateral Renal Calculus*** | ***Hb: 72%*** | | ***IMPRESSION: Normal study OBSERVATION: Good Response*** |
| ***SUGAR: 283 mgs%*** | | | ***SUGAR: 195 mgs%*** | | |
| ***UREA: 24 mgs%*** | | | ***UREA: 23 mgs%*** | | |

| ***O.P No: 88386*** | ***NAME: Mr. Mahesh*** | ***AGE/SEX: 18 / M*** | ***FROM: 05.11.2012*** | ***TO: 10.12.2012*** |
|---|---|---|---|---|
| ***COMPAINTS AND DURATION: Loin pain radiating to groin since 25 days*** | | | | |
| ***INVESTIGATIONS*** | | | | |
| ***BEFORE TREATMENT*** | | | ***AFTER TREATMENT*** | |
| ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** | ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** |
| ***TC: 8200 cells/cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: Normal*** | ***TC: 8000 cells/cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: Normal*** |
| ***DC:*** | ***SUGAR: NIL*** | | ***DC:*** | ***SUGAR: NIL*** | |
| ***P:62%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: 3.2 mm calculus is seen*** | ***P: 60%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal*** |
| ***L: 32%*** | ***2-3 epi cells*** | | ***L: 38%*** | ***NAD*** | |
| ***E: 6%*** | | ***UB: Normal*** | ***E: 2%*** | | ***UB: Normal*** |
| ***ESR: ½ hr – 4 mm ESR: 1 hr – 8 mm*** | | | ***ESR: ½ hr – 3 mm ESR: 1 hr – 6 mm*** | | |
| ***Hb: 76%*** | | ***IMPRESSION: Lt Renel calculus*** | ***Hb: 76%*** | | ***IMPRESSION: Normal study OBSERVATION: Good response*** |
| ***SUGAR: 90 mgs%*** | | | ***SUGAR: 112 mgs%*** | | |
| ***UREA: 23 mgs%*** | | | ***UREA: 21 mgs%*** | | |

***DRUG: VEDIUPPU CHENDHURAM*** ***DIAGNOSIS: KALLADAIPPU***

| ***O.P No: 89043*** | ***NAME: Mrs.Shahilsa*** | ***AGE/SEX: 40 / F*** | ***FROM: 06.11.2012*** | ***TO: 12.12.2012*** |
|---|---|---|---|---|
| ***COMPAINTS AND DURATION: Loin pain radiating to groin, burning micturition since 3 months*** | | | | |
| ***INVESTIGATIONS*** | | | | |
| ***BEFORE TREATMENT*** | | | ***AFTER TREATMENT*** | |
| ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** | ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM – ABDOMEN*** |
| ***TC: 8900 cells*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: A calculi size of 9.4 mm seen*** | ***TC: 8000 cells/cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: A calculi size of 5 mm seen*** |
| ***DC:*** | ***SUGAR: +*** | | ***DC:*** | ***SUGAR: NIL*** | |
| ***P: 49%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal*** | ***P: 60%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal*** |
| ***L: 48%*** | ***NAD*** | | ***L: 38%*** | ***NAD*** | |
| ***E: 3%*** | | ***UB: Normal*** | ***E: 2%*** | | ***UB: Normal*** |
| ***ESR: ½ hr – 4 mm***<br>***ESR: 1 hr – 8 mm*** | | | ***ESR: ½ hr – 4 mm***<br>***ESR: 1 hr – 7 mm*** | | |
| ***Hb: 61%*** | | ***IMPRESSION: Rt Urethral calculus*** | ***Hb: 61%*** | | ***IMPRESSION: Rt Urethral calculus*** |
| ***SUGAR: 278 mgs%*** | | | ***SUGAR: 242 mgs%*** | | |
| ***UREA: 31 mgs%*** | | | ***UREA: 31 mgs%*** | | ***OBSERVATION: FairResponse*** |

| ***O.P No: 89898*** | ***NAME:*** *Mrs. Stella* | ***AGE/SEX: 38 / F*** | ***FROM: 08.11.2012*** | ***TO: 13.12.2012*** |
|---|---|---|---|---|
| ***COMPAINTS AND DURATION: Loin pain radiating to groin, burning micurination since 8 months*** | | | | |
| ***INVESTIGATIONS*** | | | | |
| ***BEFORE TREATMENT*** | | | ***AFTER TREATMENT*** | |
| ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** | ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** |
| ***TC: 8500 cells/cum*** | ***ALBUMIN: Trace*** | ***RIGHT KIDNEY: 8 mm calculus is seen*** | ***TC: 8600 cells/cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: 2.4 mm calculus is seen*** |
| ***DC:*** | ***SUGAR: NIL*** | | ***DC:*** | ***SUGAR: NIL*** | |
| ***P:62%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal*** | ***P: 64%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal*** |
| ***L: 34%*** | ***3-5 pus cells*** | | ***L: 34%*** | ***NAD*** | |
| ***E: 4%*** | | ***UB: Normal*** | ***E: 2%*** | | ***UB: Normal*** |
| ***ESR: ½ hr – 12 mm***<br>***ESR: 1 hr – 20 mm*** | | | ***ESR: ½ hr – 8 mm***<br>***ESR: 1 hr – 16 mm*** | | |
| ***Hb: 72%*** | | ***IMPRESSION: Lt Renel calculus*** | ***Hb: 72%*** | | ***IMPRESSION: Lt Renel calculus*** |
| ***SUGAR: 162 mgs%*** | | | ***SUGAR: 143 mgs%*** | | |
| ***UREA: 22 mgs%*** | | | ***UREA: 21 mgs%*** | | ***OBSERVATION: Fair response*** |

***DRUG: VEDIUPPU CHENDHURAM*** ***DIAGNOSIS: KALLADAIPPU***

| ***O.P No: 90360*** | ***NAME: Mrs. Fathima*** | ***AGE/SEX: 30 / F*** | ***FROM: 09.11.2012*** | ***TO: 14.12.2012*** |
|---|---|---|---|---|
| ***COMPAINTS AND DURATION: Loin pain radiating to groin, difficulty in micturition since 6 months*** | | | | |
| ***INVESTIGATIONS*** | | | | |
| ***BEFORE TREATMENT*** | | | ***AFTER TREATMENT*** | |
| ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** | ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM – ABDOMEN*** |
| ***TC: 9100 cells*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: A calculi size of 6 mm seen*** | ***TC: 9200 cells/cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: Normal*** |
| ***DC:*** | ***SUGAR: NIL*** | | ***DC:*** | ***SUGAR: NIL*** | |
| ***P: 68%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: A calculi size of 6 mm seen*** | ***P: 65%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal*** |
| ***L: 30%*** | ***5-7 pus cells*** | | ***L: 33%*** | ***NAD*** | |
| ***E: 2%*** | | ***UB: Normal*** | ***E: 2%*** | | ***UB: Normal*** |
| ***ESR: ½ hr – 5 mm ESR: 1 hr – 10 mm*** | | | ***ESR: ½ hr – 4 mm ESR: 1 hr – 8 mm*** | | |
| ***Hb: 82%*** | | ***IMPRESSION: Bilateral renal calculus*** | ***Hb: 83%*** | | ***IMPRESSION: Normal study OBSERVATION: Good Response*** |
| ***SUGAR: 97 mgs%*** | | | ***SUGAR: 72 mgs%*** | | |
| ***UREA: 23 mgs%*** | | | ***UREA: 22 mgs%*** | | |

| ***O.P No: 90354*** | ***NAME: Mrs. Kamatchi*** | ***AGE/SEX: 50 / F*** | ***FROM: 09.11.2012*** | ***TO: 21.12.2012*** |
|---|---|---|---|---|
| ***COMPAINTS AND DURATION: Loin pain radiating to groin, burning micurination since 5 months*** | | | | |
| ***INVESTIGATIONS*** | | | | |
| ***BEFORE TREATMENT*** | | | ***AFTER TREATMENT*** | |
| ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** | ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** |
| ***TC: 8700 cells/cum*** | ***ALBUMIN: Trace*** | ***RIGHT KIDNEY: 10.4 mm calculus is seen*** | ***TC: 8800 cells/cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY:5 mm calculus is seen*** |
| ***DC:*** | ***SUGAR: NIL*** | | ***DC:*** | ***SUGAR: NIL*** | |
| ***P:62%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal*** | ***P: 63%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal*** |
| ***L: 34%*** | ***3-5 epi cells*** | | ***L: 33%*** | ***NAD*** | |
| ***E: 4%*** | | ***UB: Normal*** | ***E: 4%*** | | ***UB: Normal*** |
| ***ESR: ½ hr – 6 mm ESR: 1 hr – 10 mm*** | | | ***ESR: ½ hr – 5 mm ESR: 1 hr – 8 mm*** | | |
| ***Hb: 79%*** | | ***IMPRESSION: Rt Renel and vesicle calculus*** | ***Hb: 80%*** | | ***IMPRESSION: Rt Renel and vesicle calculus OBSERVATION: Fair response*** |
| ***SUGAR: 111 mgs%*** | | | ***SUGAR: 81 mgs%*** | | |
| ***UREA: 20 mgs%*** | | | ***UREA: 19 mgs%*** | | |

***DRUG: VEDIUPPU CHENDHURAM*** ***DIAGNOSIS: KALLADAIPPU***

| ***O.P No: 98493*** | ***NAME:*** *Mrs. Selvakumaran* | ***AGE/SEX: 29 / M*** | ***FROM: 09.11.2012*** | ***TO: 24.12.2012*** |
|---|---|---|---|---|
| ***COMPAINTS AND DURATION: Loin pain radiating to groin, difficulty in micturition since 2 1/2 months*** | | | | |
| ***INVESTIGATIONS*** | | | | |
| ***BEFORE TREATMENT*** | | | ***AFTER TREATMENT*** | |
| ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** | ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM – ABDOMEN*** |
| ***TC: 7200 cells*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: A calculi size of 3.2 mm seen*** | ***TC: 9500 cells/cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: Normal*** |
| ***DC:*** | ***SUGAR: NIL*** | | ***DC:*** | ***SUGAR: NIL*** | |
| ***P: 68%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal*** | ***P: 65%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal*** |
| ***L: 38%*** | ***5-7 pus cells*** | | ***L: 33%*** | ***NAD*** | |
| ***E: 4%*** | | ***UB: Normal*** | ***E: 2%*** | | ***UB: Normal*** |
| ***ESR: ½ hr – 8 mm***<br>***ESR: 1 hr – 15 mm*** | | | ***ESR: ½ hr – 3 mm***<br>***ESR: 1 hr – 6 mm*** | | |
| ***Hb: 83%*** | | ***IMPRESSION: Right renal calculus*** | ***Hb: 86%*** | | ***IMPRESSION: Normal study***<br>***OBSERVATION: Good Response*** |
| ***SUGAR: 188 mgs%*** | | | ***SUGAR: 82 mgs%*** | | |
| ***UREA: 21 mgs%*** | | | ***UREA: 17 mgs%*** | | |

| ***O.P No: 93579*** | ***NAME: Mr. Kanagaraj*** | ***AGE/SEX: 42 / F*** | ***FROM: 19.11.2012*** | ***TO: 24.12.2012*** |
|---|---|---|---|---|
| ***COMPAINTS AND DURATION: Loin pain radiating to groin, burning micurination since 5 ½ months*** | | | | |
| ***INVESTIGATIONS*** | | | | |
| ***BEFORE TREATMENT*** | | | ***AFTER TREATMENT*** | |
| ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** | ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** |
| ***TC: 9400 cells/cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: 4.2 mm calculus is seen*** | ***TC: 9300 cells/cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY:Normal*** |
| ***DC:*** | ***SUGAR: NIL*** | | ***DC:*** | ***SUGAR: NIL*** | |
| ***P:67%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal*** | ***P: 63%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal*** |
| ***L: 31%*** | ***NAD*** | | ***L: 33%*** | ***NAD*** | |
| ***E: 2%*** | | ***UB: Normal*** | ***E: 4%*** | | ***UB: Normal*** |
| ***ESR: ½ hr – 2 mm***<br>***ESR: 1 hr – 4 mm*** | | | ***ESR: ½ hr – 1 mm***<br>***ESR: 1 hr – 2 mm*** | | |
| ***Hb: 85%*** | | ***IMPRESSION: Rt Renel and vesicle calculus*** | ***Hb: 82%*** | | ***IMPRESSION: Normal study***<br>***OBSERVATION: Good response*** |
| ***SUGAR: 79 mgs%*** | | | ***SUGAR: 81 mgs%*** | | |
| ***UREA: 18 mgs%*** | | | ***UREA: 19 mgs%*** | | |

***DRUG: VEDIUPPU CHENDHURAM*** ***DIAGNOSIS: KALLADAIPPU***

| ***O.P No: 94125*** | ***NAME:*** *Mrs. Ethil betty* | ***AGE/SEX: 36 / F*** | ***FROM: 20.11.2012*** | ***TO: 26.12.2012*** |
|---|---|---|---|---|
| ***COMPAINTS AND DURATION: Loin pain radiating to groin in left side, difficulty in micturition since 9 months*** | | | | |
| ***INVESTIGATIONS*** | | | | |
| ***BEFORE TREATMENT*** | | | ***AFTER TREATMENT*** | |
| ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** | ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM – ABDOMEN*** |
| ***TC: 7000 cells*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: Normal*** | ***TC: 7100 cells/cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: Normal*** |
| ***DC:*** | ***SUGAR: NIL*** | | ***DC:*** | ***SUGAR: NIL*** | |
| ***P: 55%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: 5.7 mm calculus is seen*** | ***P: 58%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal*** |
| ***L: 36%*** | ***NAD*** | | ***L: 38%*** | ***NAD*** | |
| ***E: 9%*** | | ***UB: Normal*** | ***E: 4%*** | | ***UB: Normal*** |
| ***ESR: ½ hr – 2 mm***<br>***ESR: 1 hr – 4 mm*** | | | ***ESR: ½ hr – 3 mm***<br>***ESR: 1 hr – 6 mm*** | | |
| ***Hb: 80%*** | | ***IMPRESSION: Lt renal calculus*** | ***Hb: 82%*** | | ***IMPRESSION: Normal study*** |
| ***SUGAR: 68 mgs%*** | | | ***SUGAR: 78 mgs%*** | | ***OBSERVATION: Good Response*** |
| ***UREA: 16 mgs%*** | | | ***UREA: 15 mgs%*** | | |

| ***O.P No: 94129*** | ***NAME: Mr. Durai*** | ***AGE/SEX: 38 / M*** | ***FROM: 20.11.2012*** | ***TO: 25.12.2012*** |
|---|---|---|---|---|
| ***COMPAINTS AND DURATION: Loin pain radiating to groin, burning micurination since one year*** | | | | |
| ***INVESTIGATIONS*** | | | | |
| ***BEFORE TREATMENT*** | | | ***AFTER TREATMENT*** | |
| ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** | ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** |
| ***TC: 8000 cells/cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: Normal*** | ***TC: 8200 cells/cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY:Normal*** |
| ***DC:*** | ***SUGAR: NIL*** | | ***DC:*** | ***SUGAR: NIL*** | |
| ***P:62%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: 8 mm calculus I seen*** | ***P: 65%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: 2 mm calculus I seen*** |
| ***L: 30%*** | ***NAD*** | | ***L: 34%*** | ***NAD*** | |
| ***E: 8%*** | | ***UB: Normal*** | ***E: 1%*** | | ***UB: Normal*** |
| ***ESR: ½ hr – 4 mm***<br>***ESR: 1 hr – 8 mm*** | | | ***ESR: ½ hr – 3 mm***<br>***ESR: 1 hr – 5 mm*** | | |
| ***Hb: 85%*** | | ***IMPRESSION: Lt Renel and vesicle calculus*** | ***Hb: 87%*** | | ***IMPRESSION: Lt Renel and vesicle calculus*** |
| ***SUGAR: 74 mgs%*** | | | ***SUGAR: 92 mgs%*** | | ***OBSERVATION: Fair response*** |
| ***UREA: 18 mgs%*** | | | ***UREA: 16 mgs%*** | | |

***DRUG: VEDIUPPU CHENDHURAM*** ***DIAGNOSIS: KALLADAIPPU***

| ***O.P No: 94130*** | ***NAME: Mrs. Rukmani*** | ***AGE/SEX: 36 / F*** | ***FROM: 20.11.2012*** | ***TO: 25.12.2012*** |
|---|---|---|---|---|
| ***COMPAINTS AND DURATION: Loin pain radiating to groin since 6 months*** | | | | |
| ***INVESTIGATIONS*** | | | | |
| ***BEFORE TREATMENT*** | | | ***AFTER TREATMENT*** | |
| ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** | ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM – ABDOMEN*** |
| ***TC: 8400 cells*** | ***ALBUMIN: Trace*** | ***RIGHT KIDNEY: 10.3 mm calculus is seen*** | ***TC: 8500 cells/cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: 3.1 mm calculus is seen*** |
| ***DC:*** | ***SUGAR: NIL*** | | ***DC:*** | ***SUGAR: NIL*** | |
| ***P: 59%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: 10.3 mm calculus is seen*** | ***P: 62%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: 3.1 mm calculus is seen*** |
| ***L: 31%*** | ***1-3 pus cells*** | | ***L: 33%*** | ***NAD*** | |
| ***E: 10%*** | | ***UB: Normal*** | ***E: 5%*** | | ***UB: Normal*** |
| ***ESR: ½ hr – 12 mm ESR: 1 hr – 24 mm*** | | | ***ESR: ½ hr – 9 mm ESR: 1 hr – 18 mm*** | | |
| ***Hb: 76%*** | | ***IMPRESSION: Bilateral renal calculus*** | ***Hb: 78%*** | | ***IMPRESSION: Bilateral renal calculus OBSERVATION: Fair Response*** |
| ***SUGAR: 158 mgs%*** | | | ***SUGAR: 109 mgs%*** | | |
| ***UREA: 27 mgs%*** | | | ***UREA: 26 mgs%*** | | |

| ***O.P No: 94540*** | ***NAME: Mrs. Mumtaz*** | ***AGE/SEX: 37 / F*** | ***FROM: 21.11.2012*** | ***TO: 26.12.2012*** |
|---|---|---|---|---|
| ***COMPAINTS AND DURATION: Loin pain radiating to groin, burning micurination since 5 months*** | | | | |
| ***INVESTIGATIONS*** | | | | |
| ***BEFORE TREATMENT*** | | | ***AFTER TREATMENT*** | |
| ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** | ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** |
| ***TC: 8000 cells/cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: 7.6 mm calculus I seen*** | ***TC: 8200 cells/cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: 2 mm calculus I seen*** |
| ***DC:*** | ***SUGAR: NIL*** | | ***DC:*** | ***SUGAR: NIL*** | |
| ***P:62%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal*** | ***P: 65%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal*** |
| ***L: 30%*** | ***NAD*** | | ***L: 34%*** | ***NAD*** | |
| ***E: 8%*** | | ***UB: Normal*** | ***E: 1%*** | | ***UB: Normal*** |
| ***ESR: ½ hr – 4 mm ESR: 1 hr – 8 mm*** | | | ***ESR: ½ hr – 3 mm ESR: 1 hr – 5 mm*** | | |
| ***Hb: 85%*** | | ***IMPRESSION: Lt Renel and vesicle calculus*** | ***Hb: 87%*** | | ***IMPRESSION: Rt Renal calculus OBSERVATION:Goodresponse*** |
| ***SUGAR: 74 mgs%*** | | | ***SUGAR: 92 mgs%*** | | |
| ***UREA: 18 mgs%*** | | | ***UREA: 16 mgs%*** | | |

***DRUG: VEDIUPPU CHENDHURAM*** ***DIAGNOSIS: KALLADAIPPU***

| ***O.P No: 94547*** | ***NAME:*** *Mr. Chellapandian* | ***AGE/SEX: 45 / M*** | ***FROM: 21.11.2012*** | ***TO: 26.12.2012*** |
|---|---|---|---|---|
| ***COMPAINTS AND DURATION: Loin pain radiating to groin since 8 ½ months*** | | | | |
| ***INVESTIGATIONS*** | | | | |
| ***BEFORE TREATMENT*** | | | ***AFTER TREATMENT*** | |
| ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** | ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM – ABDOMEN*** |
| ***TC: 9200 cells*** | ***ALBUMIN: Trace*** | ***RIGHT KIDNEY: Normal*** | ***TC: 8900 cells/cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: Normal*** |
| ***DC:*** | ***SUGAR: NIL*** | | ***DC:*** | ***SUGAR: NIL*** | |
| ***P: 58%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal*** | ***P: 60%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal*** |
| ***L: 34%*** | ***1-3 pus cells*** | | ***L: 36%*** | ***NAD*** | |
| ***E: 8%*** | | ***UB: 9.4 mm calculus is seen*** | ***E: 4%*** | | ***UB: 3 mm calculus is seen*** |
| ***ESR: ½ hr – 4 mm***<br>***ESR: 1 hr – 8 mm*** | | | ***ESR: ½ hr – 8 mm***<br>***ESR: 1 hr – 17 mm*** | | |
| ***Hb: 80%*** | | ***IMPRESSION: Vesicle calculus*** | ***Hb: 82%*** | | ***IMPRESSION: Vesicle calculus*** |
| ***SUGAR: 90 mgs%*** | | | ***SUGAR: 95 mgs%*** | | ***OBSERVATION: Fair Response*** |
| ***UREA: 25 mgs%*** | | | ***UREA: 23 mgs%*** | | |

| ***O.P No: 94550*** | ***NAME: Mr. Murugaiah*** | ***AGE/SEX: 34 / M*** | ***FROM: 21.11.2012*** | ***TO: 26.12.2012*** |
|---|---|---|---|---|
| ***COMPAINTS AND DURATION: Loin pain radiating to groin, burning micurination since 3 months*** | | | | |
| ***INVESTIGATIONS*** | | | | |
| ***BEFORE TREATMENT*** | | | ***AFTER TREATMENT*** | |
| ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** | ***BLOOD*** | ***URINE*** | ***ULTRASONOGRAM - ABDOMEN*** |
| ***TC: 8000 cells/cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: 10 mm calculus I seen*** | ***TC: 8200 cells/cum*** | ***ALBUMIN: NIL*** | ***RIGHT KIDNEY: 4.2 mm calculus I seen*** |
| ***DC:*** | ***SUGAR: NIL*** | | ***DC:*** | ***SUGAR: NIL*** | |
| ***P:60%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal*** | ***P: 65%*** | ***DEPOSITS:*** | ***LEFT KIDNEY: Normal*** |
| ***L: 38%*** | ***NAD*** | | ***L: 34%*** | ***NAD*** | |
| ***E: 2%*** | | ***UB: Normal*** | ***E: 1%*** | | ***UB: Normal*** |
| ***ESR: ½ hr – 4 mm***<br>***ESR: 1 hr – 8 mm*** | | | ***ESR: ½ hr – 3 mm***<br>***ESR: 1 hr – 5 mm*** | | |
| ***Hb: 89%*** | | ***IMPRESSION: Rt Renel calculus*** | ***Hb: 87%*** | | ***IMPRESSION: Rt Renal calculus*** |
| ***SUGAR: 72 mgs%*** | | | ***SUGAR: 92 mgs%*** | | ***OBSERVATION:Goodresponse*** |
| ***UREA: 16 mgs%*** | | | ***UREA: 16 mgs%*** | | |

# IN-PATIENT

| | | | | | |
|---|---|---|---|---|---|
| **Name** | Mr.RADHAKRISHNAN | **Age :** 56 | **Sex :** M | **Ward :** PGII | **I.P.No :** 2009 | **Occupation :** Collie |
| **Date of Admission :** 21.06.2012 . | | **Date of Discharge :** 21.07.2012 | | | | |
| **Drug :** VENNOCHI ILAI CHOORANAM1gm bd a Day With Luke Warm Water | | | | **Diagnosis** | Eraippu Erumal | |

| **Complaints & Duration** | **Investigations Before Treatment** | | **Investigations After Treatement** | |
|---|---|---|---|---|
| Cough without expectoration, breathlessness tightness of chest since 3 months. | **BLOOD** | | **BLOOD** | |
| | **TC -** 8900cells/cu.mm | | **TC** 9600Cells/cu.mm | |
| | **DC** | **P -** 60% **L -** 35% **E-** 5% | **DC** | **P -** 59% **L -** 39% **E -** 2% |
| | **ESR** | **½ hr -** 6mm **1 hr -** 12mm | **ESR** | **½ hr -** 4mm **1 hr -** 8mm |
| | Hb | 72% | Hb | 81% |
| **Diet** | Bl.Sugar(R) | 100mgs% | Bl.Sugar(R) | 98 mgs% |
| | Bl. Urea | 29 mgs% | Bl. Urea | 33 mgs% |
| Mixed diet | Serum Cholesterol | 186 mgs% | Serum Cholesterol | 198 mgs% |
| | **URINE** | | **URINE** | |
| | Albumin | Nil | Albumin | Nil |
| **History** | Sugar | Nil | Sugar | Nil |
| | Deposits | Occ pus cells | Deposits | NAD |
| History of allergy present | **PEFR** | 100 Lits/min | **PEFR** | 320 Lits/min |
| | **CHEST X – RAY** | Normal | **RESPONSE** | Good, No adverse effect. |
| | **SPUTUM FOR AFB** | Negative | | |
| | **MANTOUX** | Negative | | |

| **Days** | | **1** | **3** | **6** | **9** | **12** | **15** | **18** | **21** | **25** | **30** | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Cough** | | P | P | P | P | P | R | R | R | A | A | |
| **Breathlessness** | | ++ | ++ | ++ | ++ | ++ | + | + | + | + | A | |
| **Sputum** | **Colour** | W | W | W | W | W | W | W | W | W | - | |
| | **Quantity** | 5ml | 10ml | 10ml | 15ml | 15ml | 10ml | 10ml | 5ml | 2ml | A | |
| **Rhonchi** | | ++ | ++ | ++ | ++ | ++ | + | + | + | A | A | |
| **RR** | | 28/min | 28/min | 26/min | 24/min | 23/min | 22/min | 22/min | 20/min | 19/min | 18/min | |

**P –** Present **R –** Reduced **A –** Absent W – Whitish Y Yellowish

**Good Response :** Significant amelioration of signs & symptoms Mild + Moderate ++ Severe +++
**Fair Response :** Partial amelioration of signs and symptoms
**Poor response :** In significant amelioration of signs and symptoms

# IN-PATIENT

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Name** | MRS.POILLAMMAL | **Age :** 60 | **Sex :** F | **Ward :** PGII | **I.P.No :** 2102 | **Occupation :** Coolie | | | | | | |
| **Date of Admission :** 28.06.2012 | | **Date of Discharge :** 30.07.2012 | | | | | | | | | | |
| **Drug :** VENNOCHI ILAI CHOORANAM 1gm bd a Day With Luke Warm Water | | | | | **Diagnosis** | Eraippu Erumal | | | | | | |
| **Complaints & Duration** | | **Investigations Before Treatment** | | | **Investigations After Treatement** | | | | | | | |
| Cough without expectoration, difficulty in breathing, tightness of chest since 6 months. | | **BLOOD** | | | **BLOOD** | | | | | | | |
| | | **TC -** 8500cells/cu.mm | | | **TC** 8900 Cells/cu.mm | | | | | | | |
| | | **DC** | **P -** 64% | **L -** 30% | **E-** 6% | **DC** | **P -** 66% | **L -** 31% | **E -** 3% | | | |
| | | **ESR** | **½ hr -** 9mm | **1 hr -** 20mm | | **ESR** | **½ hr -** 4mm | **1 hr -** 10mm | | | | |
| | | Hb | 68% | | | Hb | 72 % | | | | | |
| **Diet** | | Bl.Sugar(R) | 95 mgs% | | | Bl.Sugar(R) | 100mgs% | | | | | |
| Mixed diet | | Bl. Urea | 21mgs% | | | Bl. Urea | 19 mgs% | | | | | |
| | | Serum Cholesterol | 157 mgs% | | | Serum Cholesterol | 167mgs% | | | | | |
| | | **URINE** | | | | **URINE** | | | | | | |
| | | Albumin | Nil | | | Albumin | Nil | | | | | |
| **History** | | Sugar | Nil | | | Sugar | Nil | | | | | |
| History of allergy present | | Deposits | NAD | | | Deposits | NAD | | | | | |
| | | **PEFR** | 140Lits/min | | | **PEFR** | 340 Lits/min | | | | | |
| | | **CHEST X – RAY** | Normal | | | **RESPONSE** | Good, No adverse effect. | | | | | |
| | | **SPUTUM FOR AFB** | Negative | | | | | | | | | |
| | | **MANTOUX** | Negative | | | | | | | | | |

| **Days** | | **1** | **3** | **6** | **9** | **12** | **15** | **18** | **21** | **25** | **35** | **45** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Cough** | | P | P | P | R | R | R | A | A | A | | |
| **Breathlessness** | | ++ | ++ | ++ | ++ | + | + | + | A | A | | |
| **Sputum** | **Colour** | W | W | W | W | W | W | - | - | - | | |
| | **Quantity** | 5ml | 5ml | 20ml | 20ml | 15ml | 10ml | 5ml | 1ml | A | | |
| **Rhonchi** | | ++ | ++ | ++ | ++ | + | + | + | + | A | | |
| **RR** | | 27/min | 24/min | 23/min | 23/min | 21/min | 20/min | 20/min | 18/min | 19/min | | |

**P –** Present **R –** Reduced **A –** Absent W – Whitish Y Yellowish

**Good Response :** Significant amelioration of signs & symptoms Mild + Moderate ++ Severe +++
**Fair Response :** Partial amelioration of signs and symptoms
**Poor response :** In significant amelioration of signs and symptoms

# IN-PATIENT

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Name** | MRS.VISALAKSHI | **Age :** 48 | **Sex :** F | **Ward :** PGII | **I.P.No :** | **Occupation :** Coolie | | | | | | |
| **Date of Admission :** 31.07.2012 | | **Date of Discharge :** 17.08.2012 | | | | | | | | | | |
| **Drug :** VENNOCHI ILAI CHOORANAM 1gm bd a Day With Luke Warm Water | | | | | **Diagnosis** | Eraippu Erumal | | | | | | |
| **Complaints & Duration** | | **Investigations Before Treatment** | | | **Investigations After Treatement** | | | | | | | |
| Cough without expectoration breathlessness, tightness of chest since 6 months | | **BLOOD** | | | **BLOOD** | | | | | | | |
| | | **TC -** 8700cells/cu.mm | | | **TC** 9200Cells/cu.mm | | | | | | | |
| | | **DC** **P -** 68% **L -** 28% **E-** 4% | | | **DC** **P -** 60% **L -** 39 % **E -** 1% | | | | | | | |
| | | **ESR** **½ hr -** 5mm **1 hr -** 8mm | | | **ESR** **½ hr -** 4mm **1 hr -** 10 mm | | | | | | | |
| | | Hb 69% | | | Hb 71 % | | | | | | | |
| **Diet** | | Bl.Sugar(R) 94 mgs% | | | Bl.Sugar(R) 100 mgs% | | | | | | | |
| Mixed diet | | Bl. Urea 22mgs% | | | Bl. Urea 20 mgs% | | | | | | | |
| | | Serum Cholesterol 158 mgs% | | | Serum Cholesterol 165 mgs% | | | | | | | |
| | | **URINE** | | | **URINE** | | | | | | | |
| | | Albumin Nil | | | Albumin Nil | | | | | | | |
| **History** | | Sugar Nil | | | Sugar Nil | | | | | | | |
| History of allergy present | | Deposits NAD | | | Deposits NAD | | | | | | | |
| | | **PEFR** 130 Lits/min | | | **PEFR** 320 Lits/min | | | | | | | |
| | | **CHEST X – RAY** Normal | | | **RESPONSE** Good, No adverse effect. | | | | | | | |
| | | **SPUTUM FOR AFB** Negative | | | | | | | | | | |
| | | **MANTOUX** Negative | | | | | | | | | | |
| **Days** | | **1** | **3** | **6** | **9** | **12** | **15** | **18** | **21** | **25** | **35** | **45** |
| **Cough** | | P | P | P | P | R | R | R | R | A | | |
| **Breathlessness** | | +++ | ++ | ++ | ++ | + | + | + | + | A | | |
| **Sputum** | **Colour** | W | W | W | W | W | W | W | W | - | | |
| | **Quantity** | 10ml | 15ml | 15ml | 10ml | 10ml | 5ml | 5ml | 4ml | 2ml | | |
| **Rhonchi** | | +++ | ++ | ++ | ++ | ++ | + | + | + | + | | |
| **RR** | | 24/min | 24/min | 24/min | 23/min | 23/min | 12/min | 20/min | 19/min | 18/min | | |

**P –** Present **R –** Reduced **A –** Absent W – Whitish Y Yellowish

**Good Response :** Significant amelioration of signs & symptoms Mild + Moderate ++ Severe +++
**Fair Response :** Partial amelioration of signs and symptoms
**Poor response :** In significant amelioration of signs and symptoms

# IN-PATIENT

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Name** | MR.VASANTAKUMAR | **Age :** 48 | **Sex :** M | **Ward :** PGII | **I.P.No :** 2580 | **Occupation :** Farmer | | | | | | |
| **Date of Admission :** 06.08.2012 | | **Date of Discharge :** 29.08.2012 | | | | | | | | | | |
| **Drug :** VENNOCHI ILAI CHOORANAM 1gm bd a Day With Luke Warm Water | | | | | **Diagnosis** | Eraippu Erumal | | | | | | |
| **Complaints & Duration** | | **Investigations Before Treatment** | | | **Investigations After Treatement** | | | | | | | |
| Cough without expectoration breathlessness, tightness of chest since 8 months | | **BLOOD** | | | **BLOOD** | | | | | | | |
| | | **TC -** 8200cells/cu.mm | | | **TC** 9700 Cells/cu.mm | | | | | | | |
| | | **DC** | **P -** 64% | **L -** 30% | **E-** 6% | **DC** | **P -** 60% | **L -** 38% | **E -** 2% | | | |
| | | **ESR** | **½ hr -** 12mm | **1 hr -** 28mm | | **ESR** | **½ hr -** 6mm | **1 hr -** 12mm | | | | |
| | | Hb | 68% | | | Hb | 69% | | | | | |
| **Diet** | | Bl.Sugar(R) | 76 mgs% | | | Bl.Sugar(R) | 81mgs% | | | | | |
| Mixed diet | | Bl. Urea | 31mgs% | | | Bl. Urea | 26 mgs% | | | | | |
| | | Serum Cholesterol | 162 mgs% | | | Serum Cholesterol | 171 mgs% | | | | | |
| | | **URINE** | | | | **URINE** | | | | | | |
| | | Albumin | Nil | | | Albumin | Nil | | | | | |
| **History** | | Sugar | Nil | | | Sugar | Nil | | | | | |
| History of smoking present | | Deposits | 2 to 4 epithelial cells | | | Deposits | NAD | | | | | |
| | | **PEFR** | 120Lits/min | | | **PEFR** | 210 Lits/min | | | | | |
| | | **CHEST X – RAY** | Bronchitis | | | **RESPONSE** | Fair, No adverse effect. | | | | | |
| | | **SPUTUM FOR AFB** | Negative | | | | | | | | | |
| | | **MANTOUX** | Negative | | | | | | | | | |

| **Days** | | **1** | **3** | **6** | **9** | **12** | **15** | **18** | **21** | **25** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Cough** | | P | P | P | P | R | R | R | A | A | | |
| **Breathlessness** | | ++ | ++ | ++ | + | + | + | + | + | + | | |
| **Sputum** | **Colour** | W | W | W | W | W | W | W | W | W | | |
| | **Quantity** | 10ml | 15ml | 15ml | 20ml | 20ml | 20ml | 15ml | 10ml | 10ml | | |
| **Rhonchi** | | ++ | ++ | ++ | ++ | ++ | + | + | + | + | | |
| **RR** | | 25/min | 25/min | 24/min | 24/min | 23/min | 23/min | 22/min | 22/min | 20/min | | |

**P –** Present **R –** Reduced **A –** Absent W – Whitish Y Yellowish

**Good Response :** Significant amelioration of signs & symptoms Mild + Moderate ++ Severe +++
**Fair Response :** Partial amelioration of signs and symptoms
**Poor response :** In significant amelioration of signs and symptoms

# IN-PATIENT

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Name** | MRS.SARASWATHI | **Age :** 45 | **Sex :** F | **Ward :** PGII | **I.P.No :** 2588 | **Occupation :** coolie | | | | | | |
| **Date of Admission :** 07.08.2011 | | **Date of Discharge :** 24.8.2012 | | | | | | | | | | |
| **Drug :** VENNOCHI ILAI CHOORANAM 1gm bd a Day With Luke Warm Water | | | | | **Diagnosis** | Eraippu Erumal | | | | | | |
| **Complaints & Duration** | | **Investigations Before Treatment** | | | **Investigations After Treatement** | | | | | | | |
| Cough without expectoration, breathlessness tightness of chest since 4months | | **BLOOD** | | | **BLOOD** | | | | | | | |
| | | **TC -** 9100cells/cu.mm | | | **TC** 9600Cells/cu.mm | | | | | | | |
| | | **DC** **P -** 61% **L -** 32% **E-** 7% | | | **DC** **P -** 70% **L -** 27% **E -** 3% | | | | | | | |
| | | **ESR** **½ hr -** 5mm **1 hr -** 10mm | | | **ESR** **½ hr -** 2mm **1 hr -** 4mm | | | | | | | |
| | | Hb 70% | | | Hb 73% | | | | | | | |
| **Diet** | | Bl.Sugar(R) 80 mgs% | | | Bl.Sugar(R) 94mgs% | | | | | | | |
| Mixed diet | | Bl. Urea 21 mgs% | | | Bl. Urea 24 mgs% | | | | | | | |
| | | Serum Cholesterol 157mgs% | | | Serum Cholesterol 168 mgs% | | | | | | | |
| | | **URINE** | | | **URINE** | | | | | | | |
| | | Albumin Nil | | | Albumin Nil | | | | | | | |
| **History** | | Sugar Nil | | | Sugar Nil | | | | | | | |
| History of allergy present | | Deposits NAD | | | Deposits NAD | | | | | | | |
| | | **PEFR** 120 Lits/min | | | **PEFR** 300 Lits/min | | | | | | | |
| | | **CHEST X – RAY** Normal | | | **RESPONSE** Good, No adverse effect. | | | | | | | |
| | | **SPUTUM FOR AFB** Negative | | | | | | | | | | |
| | | **MANTOUX** Negative | | | | | | | | | | |
| **Days** | | **1** | **3** | **6** | **9** | **12** | **15** | **18** | **21** | **25** | | |
| **Cough** | | P | P | P | R | R | R | A | A | A | | |
| **Breathlessness** | | +++ | ++ | ++ | ++ | + | + | + | A | A | | |
| **Sputum** | **Colour** | W | W | W | W | W | W | - | - | - | | |
| | **Quantity** | 5ml | 15ml | 20ml | 20ml | 15ml | 10ml | 5ml | 2ml | A | | |
| **Rhonchi** | | +++ | ++ | ++ | ++ | + | + | + | A | A | | |
| **RR** | | 26/min | 26/min | 25/min | 23/min | 23/min | 21/min | 20/min | 19/min | 18/min | | |

**P –** Present **R –** Reduced **A –** Absent W – Whitish Y Yellowish

**Good Response :** Significant amelioration of signs & symptoms Mild + Moderate ++ Severe +++
**Fair Response :** Partial amelioration of signs and symptoms
**Poor response :** In significant amelioration of signs and symptoms

# IN-PATIENT

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Name** | MRS.PETCIAMMAL | **Age :** 55 | **Sex :** F | **Ward :** PGII | **I.P.No :** 2802 | **Occupation :** Coolie | | | | | |
| **Date of Admission :** 24.08.2012 | | **Date of Discharge :** 24.09.2012 | | | | | | | | | |
| **Drug :** VENNOCHI ILAI CHOORANAM 1gm bd a Day With Luke Warm Water | | | | | **Diagnosis** | Eraippu Erumal | | | | | |

| **Complaints & Duration** | **Investigations Before Treatment** | | **Investigations After Treatement** | |
|---|---|---|---|---|
| Cough without expectoration, tightness of chest breathlessness since 5months | **BLOOD** | | **BLOOD** | |
| | **TC -** 8200 cells/cu.mm | | **TC -** 8500 Cells/cu.mm | |
| | **DC** | **P -** 61% **L -** 34% **E-** 5% | **DC** | **P -** 63% **L -** 36% **E -** 1% |
| | **ESR** | **½ hr -** 5mm **1 hr -** 10mm | **ESR** | **½ hr -** 3mm **1 hr -** 7mm |
| | Hb | 68% | Hb | 74% |
| **Diet** | Bl.Sugar(R) | 94mgs% | Bl.Sugar(R) | 92mgs% |
| | Bl. Urea | 25mgs% | Bl. Urea | 30 mgs% |
| Mixed diet | Serum Cholesterol | 177 mgs% | Serum Cholesterol | 186 mgs% |
| | **URINE** | | **URINE** | |
| | Albumin | Nil | Albumin | Nil |
| **History** | Sugar | Nil | Sugar | Nil |
| | Deposits | NAD | Deposits | NAD |
| History of allergy present | **PEFR** | 90 Lits/min | **PEFR** | 320 Lits/min |
| | **CHEST X – RAY** | Normal | **RESPONSE** | Good, No adverse effect. |
| | **SPUTUM FOR AFB** | Negative | | |
| | **MANTOUX** | Negative | | |

| **Days** | | **1** | **3** | **6** | **9** | **12** | **15** | **18** | **21** | **25** | **30** | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Cough** | | P | P | P | R | R | R | A | A | A | A | |
| **Breathlessness** | | ++ | ++ | ++ | ++ | + | + | + | A | A | A | |
| **Sputum** | **Colour** | W | W | W | W | W | W | W | A | A | A | |
| | **Quantity** | 15ml | 10ml | 12ml | 15ml | 10ml | 5ml | 2ml | A | - | - | |
| **Rhonchi** | | ++ | ++ | ++ | + | + | + | A | A | A | A | |
| **RR** | | 28/min | 28/min | 26/min | 26/min | 25/min | 25/min | 20/min | 19/min | 19/min | 19min | |

**P –** Present **R –** Reduced **A –** Absent W – Whitish Y Yellowish

**Good Response :** Significant amelioration of signs & symptoms Mild + Moderate ++ Severe +++
**Fair Response :** Partial amelioration of signs and symptoms
**Poor response :** In significant amelioration of signs and symptoms

# IN-PATIENT

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Name** | MRS.CHELAKANI | **Age :** 49 | **Sex :** F | **Ward :** PGII | **I.P.No :** 3927 | **Occupation :** coolie | | | | | | | |
| **Date of Admission :** 19.11.2011 | | **Date of Discharge :** 12.12.2012 | | | | | | | | | | | |
| **Drug :** VENNOCHI ILAI CHOORANAM 1gm bd a Day With Luke Warm Water | | | | | **Diagnosis** | Eraippu Erumal | | | | | | | |
| **Complaints & Duration** | | **Investigations Before Treatment** | | | **Investigations After Treatement** | | | | | | | | |
| Cough without expectoration, breathlessness tightness of chest since 9 months | | **BLOOD** | | | **BLOOD** | | | | | | | | |
| | | **TC -** 9700cells/cu.mm | | | **TC -** 9900 Cells/cu.mm | | | | | | | | |
| | | **DC** | **P -** 70% | **L -** 24% | **E-** 6% | **DC** | **P -** 71% | **L -** 25% | **E -** 4% | | | | |
| | | **ESR** | **½ hr -** 10mm | **1 hr -** 20mm | | **ESR** | **½ hr -** 6mm | **1 hr -** 12mm | | | | | |
| | | Hb | 68% | | | Hb | 70% | | | | | | |
| **Diet** | | Bl.Sugar(R) | 97mgs% | | | Bl.Sugar(R) | 88mgs% | | | | | | |
| Mixed diet | | Bl. Urea | 24mgs% | | | Bl. Urea | 29 mgs% | | | | | | |
| | | Serum Cholesterol | 177mgs% | | | Serum Cholesterol | 181 mgs% | | | | | | |
| | | **URINE** | | | | **URINE** | | | | | | | |
| | | Albumin | Nil | | | Albumin | Nil | | | | | | |
| **History** | | Sugar | Nil | | | Sugar | Nil | | | | | | |
| History of allergy present | | Deposits | NAD | | | Deposits | NAD | | | | | | |
| | | **PEFR** | 90Lits/min | | | **PEFR** | 220 Lits/min | | | | | | |
| | | **CHEST X – RAY** | Bronchitis | | | **RESPONSE** | Fair, No adverse effect. | | | | | | |
| | | **SPUTUM FOR AFB** | Negative | | | | | | | | | | |
| | | **MANTOUX** | Negative | | | | | | | | | | |

| **Days** | | **1** | **3** | **6** | **9** | **12** | **15** | **18** | **21** | **24** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Cough** | | P | P | P | P | P | R | R | R | R | | |
| **Breathlessness** | | ++ | ++ | ++ | ++ | + | + | + | + | + | | |
| **Sputum** | **Colour** | W | W | W | W | W | W | W | W | W | | |
| | **Quantity** | 10ml | 15ml | 15ml | 10ml | 10ml | 5ml | 4ml | 4ml | 2ml | | |
| **Rhonchi** | | ++ | ++ | ++ | ++ | + | + | + | + | + | | |
| **RR** | | 26/min | 24/min | 24/min | 23/min | 23/min | 21/min | 21/min | 20/min | 20/min | | |

**P –** Present **R –** Reduced **A –** Absent W – Whitish Y Yellowish

**Good Response :** Significant amelioration of signs & symptoms Mild + Moderate ++ Severe +++
**Fair Response :** Partial amelioration of signs and symptoms
**Poor response :** In significant amelioration of signs and symptoms

# IN-PATIENT

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Name** | MRS.MERIAMMAL | **Age :** 60 | **Sex :** F | **Ward :** PGII | **I.P.No :** 3938 | **Occupation :** Coolie | | | | | | |
| **Date of Admission :** 20.11.2012 | | **Date of Discharge :** 19.12.2012 | | | | | | | | | | |
| **Drug :** VENNOCHI ILAI CHOORANAM 1gm bd a Day With Luke Warm Water | | | | | **Diagnosis** | Eraippu Erumal | | | | | | |
| **Complaints & Duration** | | **Investigations Before Treatment** | | | **Investigations After Treatement** | | | | | | | |
| Cough without expectoration, breathlessness tightness of chest since 5 months | | **BLOOD** | | | **BLOOD** | | | | | | | |
| | | **TC -** 8700cells/cu.mm | | | **TC -** 8800 Cells/cu.mm | | | | | | | |
| | | **DC** | **P -** 69% | **L -** 26% | **E-** 8% | **DC** | **P -** 68% | **L -** 30% | **E -** 2% | | | |
| | | **ESR** | **½ hr -** 10mm | **1 hr -** 20mm | | **ESR** | **½ hr -** 4mm | **1 hr -** 8mm | | | | |
| | | Hb | 68% | | | Hb | 76% | | | | | |
| **Diet** | | Bl.Sugar(R) | 97 mgs% | | | Bl.Sugar(R) | 99 mgs% | | | | | |
| Mixed diet | | Bl. Urea | 23 mgs% | | | Bl. Urea | 28mgs% | | | | | |
| | | Serum Cholesterol | 167 mgs% | | | Serum Cholesterol | 170 mgs% | | | | | |
| | | **URINE** | | | | **URINE** | | | | | | |
| | | Albumin | Nil | | | Albumin | Nil | | | | | |
| **History** | | Sugar | Nil | | | Sugar | Nil | | | | | |
| History of alllergy present | | Deposits | NAD | | | Deposits | NAD | | | | | |
| | | **PEFR** | 110 Lits/min | | | **PEFR** | 340 Lits/min | | | | | |
| | | **CHEST X – RAY** | Bronchitis | | | **RESPONSE** | Good, No adverse effect. | | | | | |
| | | **SPUTUM FOR AFB** | Negative | | | | | | | | | |
| | | **MANTOUX** | Negative | | | | | | | | | |

| **Days** | | **1** | **3** | **6** | **9** | **12** | **15** | **18** | **21** | **25** | **30** | **45** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Cough** | | P | P | P | R | R | R | A | A | A | A | |
| **Breathlessness** | | ++ | ++ | ++ | ++ | + | + | + | A | A | A | |
| **Sputum** | **Colour** | W | W | W | W | W | W | A | A | - | - | |
| | **Quantity** | 5ml | 10ml | 10ml | 15ml | 15ml | 10ml | 5ml | 1ml | A | A | |
| **Rhonchi** | | ++ | ++ | ++ | ++ | + | + | + | A | A | A | |
| **RR** | | 24/min | 24/min | 25/min | 23/min | 21/min | 20/min | 18/min | 18/min | 18/min | 18/min | |

**P –** Present **R –** Reduced **A –** Absent W – Whitish Y Yellowish

**Good Response :** Significant amelioration of signs & symptoms Mild + Moderate ++ Severe +++
**Fair Response :** Partial amelioration of signs and symptoms
**Poor response :** In significant amelioration of signs and symptoms

# IN-PATIENT

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Name** | MRS MAHAMAIAMAL | **Age :** 50 | **Sex :** F | **Ward :** PGII | **I.P.No :** 4019 | **Occupation :** Coolie | | | | | | |
| **Date of Admission :** 03.11.2011 | | **Date of Discharge :** 01.12.2011 | | | **No.of Days Treated :** 29 | | | | | | | |
| **Drug :** Perunkanchori ver Chooranam 1gm bd a Day With Luke Warm Water | | | | | **Diagnosis** Eraippu Erumal | | | | | | | |
| **Complaints & Duration** | | **Investigations Before Treatment** | | | **Investigations After Treatement** | | | | | | | |
| Cough without expectoration, difficulty in breathing tightness of chest since 6months | | **BLOOD** | | | **BLOOD** | | | | | | | |
| | | **TC -** 8300cells/cu.mm | | | **TC -** 8700 Cells/cu.mm | | | | | | | |
| | | **DC** | **P -** 54% | **L -** 42% | **E-** 4% | **DC** | **P -** 50% | **L -** 49% | **E -** 1% | | | |
| | | **ESR** | **½ hr -** 4mm | **1 hr -** 8mm | | **ESR** | **½ hr -** 2mm | **1 hr -** 3mm | | | | |
| | | Hb | 69% | | | Hb | 70% | | | | | |
| **Diet** | | Bl.Sugar(R) | 90mgs% | | | Bl.Sugar(R) | 95 mgs% | | | | | |
| Mixed diet | | Bl. Urea | 20mgs% | | | Bl. Urea | 22 mgs% | | | | | |
| | | Serum Cholesterol | 192mgs% | | | Serum Cholesterol | 197 mgs% | | | | | |
| | | **URINE** | | | | **URINE** | | | | | | |
| | | Albumin | Nil | | | Albumin | Nil | | | | | |
| **History** | | Sugar | Nil | | | Sugar | Nil | | | | | |
| History of allergy present | | Deposits | NAD | | | Deposits | NAD | | | | | |
| | | **PEFR** | 150 Lits/min | | | **PEFR** | 370 Lits/min | | | | | |
| | | **CHEST X – RAY** | Bronchitis | | | **RESPONSE** | Good, No adverse effect. | | | | | |
| | | **SPUTUM FOR AFB** | Negative | | | | | | | | | |
| | | **MANTOUX** | Negative | | | | | | | | | |

| **Days** | | **1** | **3** | **6** | **9** | **12** | **15** | **18** | **21** | **25** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Cough** | | P | P | P | R | R | R | R | A | A | | |
| **Breathlessness** | | ++ | ++ | ++ | + | + | + | + | + | A | | |
| **Sputum** | **Colour** | W | W | W | W | W | W | W | W | - | | |
| | **Quantity** | 5ml | 10ml | 10ml | 20ml | 20ml | 10ml | 5ml | 2ml | A | | |
| **Rhonchi** | | ++ | ++ | ++ | ++ | + | + | + | + | A | | |
| **RR** | | 25/min | 25/min | 24/min | 23/min | 23/min | 23/min | 22/min | 19/min | 18/min | | |

**P –** Present **R –** Reduced **A –** Absent W – Whitish Y Yellowish

**Good Response :** Significant amelioration of signs & symptoms Mild + Moderate ++ Severe +++
**Fair Response :** Partial amelioration of signs and symptoms
**Poor response :** In significant amelioration of signs and symptoms

# CLINICAL STUDY ON VENNOCHI ILAI CHOORANAM IN OP. DEPT ON MANAGEMENT OF BRONCHIAL ASTHMA

| S. No | OP. No. | Name / Age / Sex | Complaints | Duration of Days | BT / AT | RESPIRATORY SYSTEM EXAMINATION | | | | | INVESTIGATION | | | | | | | | | | | | | | RESULTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | BLOOD | | | | | | | | | | URINE | | | | |
| | | | | | | | | | | | | DC (%) | | | ESR (mm) | | | | | Blood CLmg% | | | | PFM Reading L/ Min | |
| | | | | | | COUGH | SPUTUM | BREATHLESSNESS | RHONCHI | RR / Min | TC cells/cumm | P | L | E | 1/2 Hr | 1 Hr | Hb (%) | Sgr mgs% | Ur mgs% | | Sgr | Alb | Dep | | |
| 1 | 44211 | Mrs. Thangam / F / 50 | Cough without expectoration, difficulty in breathing | 14.06.2012 to 26.07.2012 | BT | P | W | P | P | 24 | 8000 | 64 | 38 | 8 | 8 | 12 | 70 | 96 | 22 | 143 | NIL | NIL | NAD | 280 | Good |
| | | | | | AT | A | A | A | A | 18 | 8400 | 66 | 32 | 2 | 4 | 8 | 72 | 98 | 24 | 150 | NIL | NIL | NAD | 350 | |
| 2 | 44237 | Mr. Jeyaraj / M / 47 | Cough without expectoration, sneezing, breathlessness, chest tightness | 14.06.2012 to 26.07.2012 | BT | P | W | P | P | 22 | 8700 | 60 | 35 | 5 | 10 | 15 | 65 | 82 | 23 | 153 | NIL | NIL | FPC | 290 | Good |
| | | | | | AT | A | A | A | A | 16 | 8900 | 65 | 34 | 1 | 5 | 7 | 69 | 90 | 18 | 164 | NIL | NIL | NAD | 340 | |
| 3 | 45910 | Mrs. Muthulakshmi / F / 44 | Cough, difficulty in breathing, headache, chest tightness | 20.06.2012 to 01.08.2012 | BT | P | W | P | P | 26 | 8200 | 53 | 39 | 8 | 5 | 10 | 70 | 86 | 17 | 185 | NIL | NIL | NAD | 190 | Good |
| | | | | | AT | A | A | A | A | 18 | 8500 | 56 | 40 | 4 | 3 | 6 | 72 | 88 | 19 | 163 | NIL | NIL | NAD | 320 | |
| 4 | 46266 | Mr. Anatharajan / M / 78 | Cough with expectoration, difficulty in breathing, sneezing | 21.06.2012 to 27.06.2012 | BT | P | W | P | P | 22 | 8800 | 58 | 38 | 4 | 2 | 5 | 68 | 75 | 23 | 170 | NIL | NIL | FPC | 280 | Good |
| | | | | | AT | A | A | A | A | 16 | 9200 | 62 | 34 | 2 | 3 | 6 | 72 | 84 | 18 | 188 | NIL | NIL | NAD | 340 | |
| 5 | 52137 | Mr. Manickam / F / 55 | Cough without expectoration, sneezing, breathlessness, chest tightness | 11.07.2012 to 15.08.2012 | BT | P | W | P | P | 22 | 8200 | 59 | 35 | 6 | 10 | 12 | 69 | 92 | 18 | 160 | NIL | NIL | NAD | 180 | Fair |
| | | | | | AT | A | A | A | A | 14 | 8100 | 58 | 39 | 3 | 4 | 8 | 74 | 85 | 20 | 182 | NIL | NIL | NAD | 182 | |

# CLINICAL STUDY ON VENNOCHI ILAI CHOORANAM IN OP. DEPT ON MANAGEMENT OF BRONCHIAL ASTHMA

| S. No | OP. No. | Name / Age / Sex | Complaints | Duration of Days | BT / AT | RESPIRATORY SYSTEM EXAMINATION | | | | | INVESTIGATION | | | | | | | | | | | | | | RESULTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | BLOOD | | | | | | | | | Blood CLmg% | URINE | | | PFM Reading L/ Min | |
| | | | | | | | | | | | | DC (%) | | | ESR (mm) | | | | | | | | | | |
| | | | | | | COUGH | SPUTUM | BREATHLESSNESS | RHONCHI | RR / Min | TC cells/cumm | P | L | E | 1/2 Hr | 1 Hr | Hb (%) | Sgr mgs% | Ur mgs% | | Sgr | Alb | Dep | | |
| 6 | 55797 | Mrs. Gandhimathi / F / 41 | Cough without expectoration, breathlessness | 23.07.2012 to 09.09.2012 | BT | P | W | P | P | 24 | 7800 | 58 | 36 | 6 | 3 | 6 | 72 | 92 | 20 | 153 | NIL | NIL | FPC | 200 | Good |
| | | | | | AT | A | A | A | A | 18 | 8200 | 60 | 35 | 5 | 2 | 4 | 74 | 87 | 21 | 155 | NIL | NIL | NAD | 320 | |
| 7 | 58585 | Mr. Ponraj / M / 51 | Wheezing, chest tightness, Cough without expectoration | 02.08.2012 to 06.09.2012 | BT | P | W | P | P | 20 | 9000 | 62 | 35 | 3 | 8 | 12 | 68 | 95 | 19 | 168 | NIL | NIL | NAD | 280 | Good |
| | | | | | AT | A | A | A | A | 14 | 9200 | 60 | 38 | 2 | 5 | 9 | 73 | 78 | 22 | 152 | NIL | NIL | NAD | 350 | |
| 8 | 59858 | Mr. Mohideen pitchai / M / 58 | Cough without expectoration, breathlessness | 06.08.2012 to 09.09.2012 | BT | P | W | P | P | 22 | 8300 | 59 | 37 | 4 | 12 | 19 | 79 | 74 | 31 | 137 | NIL | NIL | NAD | 220 | Good |
| | | | | | AT | A | A | A | A | 16 | 8800 | 61 | 36 | 3 | 8 | 11 | 80 | 77 | 27 | 150 | NIL | NIL | NAD | 350 | |
| 9 | 59875 | Mrs. Hema / F / 41 | Cough, breathlessness, chest tightness, headache, sneezing | 06.08.2012 to 09.09.2012 | BT | P | W | P | P | 26 | 7900 | 50 | 40 | 10 | 18 | 22 | 67 | 79 | 26 | 170 | NIL | NIL | NAD | 180 | Poor |
| | | | | | AT | A | A | A | A | 22 | 8000 | 52 | 39 | 9 | 12 | 16 | 73 | 75 | 22 | 157 | NIL | NIL | NAD | 200 | |
| 10 | 60869 | Mrs. Krishnammal / F / 47 | Cough without expectoration, breathlessness, sneezing | 09.08.2012 to 13.09.2012 | BT | P | W | P | P | 22 | 8700 | 56 | 37 | 7 | 9 | 12 | 72 | 70 | 20 | 177 | NIL | NIL | NAD | 250 | Good |
| | | | | | AT | A | A | A | A | 17 | 8400 | 60 | 36 | 4 | 4 | 5 | 75 | 80 | 18 | 168 | NIL | NIL | NAD | 380 | |

# CLINICAL STUDY ON VENNOCHI ILAI CHOORANAM IN OP. DEPT ON MANAGEMENT OF BRONCHIAL ASTHMA

| S. No | OP. No. | Name / Age / Sex | Complaints | Duration of Days | BT / AT | RESPIRATORY SYSTEM EXAMINATION | | | | | INVESTIGATION | | | | | | | | | | | | | | RESULTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | BLOOD | | | | | | | | | | URINE | | | | |
| | | | | | | | | | | | | DC (%) | | | ESR (mm) | | | | | Blood CLmg% | | | | PFM Reading L/ Min | |
| | | | | | | COUGH | SPUTUM | BREATHLESSNESS | RHONCHI | RR / Min | TC cells/cumm | P | L | E | 1/2 Hr | 1 Hr | Hb (%) | Sgr mgs% | Ur mgs% | | Sgr | Alb | Dep | | |
| 11 | 60871 | Mr. Ayyakutti / M / 65 | Cough, breathlessness, chest tightness | 09.08.2012 to 13.09.2012 | BT | P | W | P | P | 22 | 9000 | 64 | 31 | 5 | 5 | 9 | 68 | 98 | 30 | 153 | NIL | NIL | NAD | 200 | Good |
| | | | | | AT | A | A | A | A | 18 | 9200 | 68 | 29 | 3 | 4 | 6 | 70 | 90 | 29 | 140 | NIL | NIL | NAD | 320 | |
| 12 | 62819 | Mr. Muthaiah / M / 50 | Cough without expectoration, breathlessness | 16.08.2012 to 20.09.2012 | BT | P | W | P | P | 26 | 8600 | 58 | 31 | 11 | 11 | 21 | 69 | 89 | 32 | 160 | NIL | NIL | FPC | 180 | Good |
| | | | | | AT | A | A | A | A | 18 | 8700 | 63 | 30 | 7 | 8 | 10 | 71 | 90 | 31 | 162 | NIL | NIL | NAD | 340 | |
| 13 | 62919 | Mrs. Kanniyammal / F / 36 | Cough, breathlessness, chest tightness, headache, sneezing | 16.08.2012 to 27.09.2012 | BT | P | W | P | P | 26 | 8900 | 59 | 37 | 4 | 7 | 14 | 78 | 75 | 28 | 129 | NIL | NIL | NAD | 150 | Good |
| | | | | | AT | A | A | A | A | 16 | 8800 | 61 | 36 | 3 | 3 | 9 | 76 | 80 | 32 | 148 | NIL | NIL | NAD | 320 | |
| 14 | 64810 | Mr. Chandrabose / M / 53 | Wheezing, chest tightness, Cough without expectoration | 23.08.2012 to 27.09.2012 | BT | P | W | P | P | 20 | 9200 | 65 | 30 | 5 | 8 | 16 | 71 | 81 | 27 | 179 | NIL | NIL | NAD | 220 | Good |
| | | | | | AT | A | A | A | A | 14 | 10000 | 64 | 33 | 3 | 5 | 8 | 74 | 83 | 25 | 164 | NIL | NIL | NAD | 350 | |
| 15 | 64154 | Mr. Mahalingam / M / 48 | Cough without expectoration, sneezing, breathlessness, chest tightness | 21.08.2012 to 25.09.2012 | BT | P | W | P | P | 26 | 8200 | 57 | 35 | 8 | 13 | 20 | 65 | 88 | 23 | 128 | NIL | NIL | NAD | 280 | Good |
| | | | | | AT | A | A | A | A | 16 | 9000 | 60 | 35 | 5 | 9 | 15 | 73 | 90 | 18 | 113 | NIL | NIL | NAD | 360 | |

## CLINICAL STUDY ON VENNOCHI ILAI CHOORANAM IN OP. DEPT ON MANAGEMENT OF BRONCHIAL ASTHMA

| S. No | OP. No. | Name / Age / Sex | Complaints | Duration of Days | BT / AT | RESPIRATORY SYSTEM EXAMINATION | | | | | INVESTIGATION | | | | | | | | | | | | | | RESULTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | BLOOD | | | | | | | | | Blood CLmg% | URINE | | | PFM Reading L/ Min | |
| | | | | | | | | | | | | DC (%) | | | ESR (mm) | | | | | | | | | | |
| | | | | | | COUGH | SPUTUM | BREATHLESSNESS | RHONCHI | RR / Min | TC cells/cumm | P | L | E | 1/2 Hr | 1 Hr | Hb (%) | Sgr mgs% | Ur mgs% | | Sgr | Alb | Dep | | |
| 16 | 69649 | Mr. Janakiraman / M / 40 | Cough, breathlessness, chest tightness | 07.09.2012 to 02.10.2012 | BT | P | W | P | P | 24 | 8800 | 64 | 32 | 4 | 9 | 13 | 68 | 90 | 22 | 160 | NIL | NIL | NAD | 190 | Good |
| | | | | | AT | A | A | A | A | 18 | 8900 | 69 | 30 | 1 | 5 | 9 | 75 | 89 | 25 | 170 | NIL | NIL | NAD | 320 | |
| 17 | 71217 | Mrs. Kanmani / F / 40 | Cough, breathlessness, chest tightness, headache, sneezing | 12.09.2012 to 17.10.2012 | BT | P | W | P | P | 20 | 8000 | 63 | 32 | 5 | 4 | 8 | 69 | 78 | 18 | 165 | NIL | NIL | NAD | 200 | Good |
| | | | | | AT | A | A | A | A | 14 | 8500 | 68 | 30 | 2 | 3 | 5 | 71 | 74 | 22 | 151 | NIL | NIL | NAD | 350 | |
| 18 | 75566 | Miss. Rama / 28 / F | Cough without expectoration, breathlessness | 25.09.2012 to 30.10.2012 | BT | P | W | P | P | 28 | 7300 | 56 | 38 | 6 | 15 | 33 | 78 | 75 | 21 | 174 | NIL | NIL | FPC | 180 | Fair |
| | | | | | AT | A | A | A | A | 18 | 7700 | 59 | 39 | 2 | 10 | 18 | 76 | 83 | 23 | 156 | NIL | NIL | NAD | 250 | |
| 19 | 78335 | Mr. Pechiappan / M / 45 | Wheezing, chest tightness, Cough without expectoration | 03.10.2012 to 07.10.2012 | BT | P | W | P | P | 21 | 8100 | 55 | 39 | 6 | 7 | 12 | 74 | 79 | 19 | 171 | NIL | NIL | NAD | 280 | Good |
| | | | | | AT | A | A | A | A | 16 | 8500 | 59 | 37 | 4 | 5 | 10 | 75 | 71 | 21 | 162 | NIL | NIL | NAD | 350 | |
| 20 | 81642 | Mr. Muthuramalingam / M / 37 | Cough without expectoration, sneezing, breathlessness, chest tightness | 13.10.2012 to 17.11.2012 | BT | P | W | P | P | 20 | 8200 | 60 | 35 | 5 | 10 | 15 | 72 | 80 | 22 | 150 | NIL | NIL | NAD | 180 | Good |
| | | | | | AT | A | A | A | A | 14 | 8800 | 59 | 38 | 3 | 5 | 9 | 71 | 83 | 20 | 155 | NIL | NIL | NAD | 340 | |

# CLINICAL STUDY ON VENNOCHI ILAI CHOORANAM IN OP. DEPT ON MANAGEMENT OF BRONCHIAL ASTHMA

| S. No | OP. No. | Name / Age / Sex | Complaints | Duration of Days | BT / AT | RESPIRATORY SYSTEM EXAMINATION | | | | | INVESTIGATION | | | | | | | | | | | | | | RESULTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | BLOOD | | | | | | | | | Blood CLmg% | URINE | | | PFM Reading L/ Min | |
| | | | | | | | | | | | | DC (%) | | | ESR (mm) | | | | | | | | | | |
| | | | | | | COUGH | SPUTUM | BREATHLESSNESS | RHONCHI | RR / Min | TC cells/cumm | P | L | E | 1/2 Hr | 1 Hr | Hb (%) | Sgr mgs% | Ur mgs% | | Sgr | Alb | Dep | | |
| 21 | 84937 | Mrs. Subbuthai / F / 32 | Cough, breathlessness, chest tightness | 25.10.2012 to 29.11.2012 | BT | P | W | P | P | 22 | 8200 | 60 | 32 | 8 | 7 | 12 | 68 | 70 | 19 | 170 | NIL | NIL | NAD | 180 | Good |
| | | | | | AT | A | A | A | A | 18 | 8300 | 62 | 35 | 3 | 4 | 8 | 69 | 81 | 21 | 160 | NIL | NIL | NAD | 320 | |
| 22 | 84952 | Mr. Muthaiah / M / 50 | Cough, breathlessness, chest tightness, headache, sneezing | 25.10.2012 to 29.11.2012 | BT | P | W | P | P | 24 | 8600 | 60 | 32 | 8 | 6 | 10 | 76 | 84 | 23 | 168 | NIL | NIL | NAD | 190 | Good |
| | | | | | AT | A | A | A | A | 16 | 9000 | 62 | 35 | 3 | 3 | 5 | 75 | 87 | 26 | 175 | NIL | NIL | NAD | 350 | |
| 23 | 84980 | Mrs. Muthulakshmi / F / 45 | Cough without expectoration, breathlessness | 25.10.2012 to 29.11.2012 | BT | P | W | P | P | 20 | 9000 | 65 | 30 | 3 | 4 | 6 | 68 | 71 | 28 | 159 | NIL | NIL | FPC | 240 | Good |
| | | | | | AT | A | A | A | A | 14 | 9300 | 62 | 37 | 1 | 2 | 3 | 72 | 74 | 24 | 162 | NIL | NIL | NAD | 350 | |
| 24 | 87775 | Mr. Mahalingam / M / 46 | Wheezing, chest tightness, Cough without expectoration | 03.11.2012 to 01.12.2012 | BT | P | W | P | P | 19 | 8700 | 55 | 40 | 5 | 4 | 10 | 63 | 70 | 22 | 189 | NIL | NIL | NAD | 180 | Good |
| | | | | | AT | A | A | A | A | 14 | 8900 | 59 | 38 | 3 | 2 | 6 | 67 | 73 | 25 | 170 | NIL | NIL | NAD | 340 | |
| 25 | 87776 | Mrs. Rosalin / F / 36 | Cough without expectoration, sneezing, breathlessness, chest tightness | 03.11.2012 to 01.12.2012 | BT | P | W | P | P | 26 | 9500 | 62 | 35 | 3 | 5 | 11 | 68 | 77 | 19 | 167 | NIL | NIL | NAD | 180 | Fair |
| | | | | | AT | A | A | A | A | 20 | 9800 | 62 | 36 | 2 | 3 | 7 | 70 | 79 | 22 | 170 | NIL | NIL | NAD | 220 | |

## CLINICAL STUDY ON VENNOCHI ILAI CHOORANAM IN OP. DEPT ON MANAGEMENT OF BRONCHIAL ASTHMA

| S. No | OP. No. | Name / Age / Sex | Complaints | Duration of Days | BT / AT | RESPIRATORY SYSTEM EXAMINATION | | | | | INVESTIGATION | | | | | | | | | | | | | | RESULTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | BLOOD | | | | | | | | | | URINE | | | | |
| | | | | | | | | | | | | DC (%) | | | ESR (mm) | | | | | Blood CLmg% | | | | PFM Reading L/ Min | |
| | | | | | | COUGH | SPUTUM | BREATHLESSNESS | RHONCHI | RR / Min | TC cells/cumm | P | L | E | 1/2 Hr | 1 Hr | Hb (%) | Sgr mgs% | Ur mgs% | | Sgr | Alb | Dep | | |
| 26 | 89014 | Mrs. Velammal / F / 45 | Cough, breathlessness, chest tightness | 06.11.2012 to 12.12.2012 | BT | P | W | P | P | 31 | 8800 | 65 | 29 | 6 | 18 | 35 | 70 | 81 | 24 | 165 | NIL | NIL | NAD | 90 | Good |
| | | | | | AT | A | A | A | A | 18 | 8200 | 66 | 32 | 2 | 9 | 10 | 71 | 85 | 19 | 180 | NIL | NIL | NAD | 200 | |
| 27 | 89038 | Mr. Govindan / M / 50 | Cough, breathlessness, chest tightness, headache, sneezing | 06.11.2012 to 12.12.2012 | BT | P | W | P | P | 24 | 9100 | 58 | 36 | 4 | 7 | 10 | 69 | 79 | 20 | 170 | NIL | NIL | NAD | 180 | Good |
| | | | | | AT | A | A | A | A | 16 | 9000 | 60 | 37 | 3 | 3 | 5 | 75 | 83 | 22 | 180 | NIL | NIL | NAD | 340 | |
| 28 | 89847 | Mrs. Rafiya Begham / F / 44 | Cough without expectoration, breathlessness | 08.11.2012 to 13.12.2012 | BT | P | W | P | P | 22 | 8500 | 55 | 38 | 7 | 5 | 8 | 70 | 81 | 22 | 160 | NIL | NIL | FPC | 90 | Fair |
| | | | | | AT | A | A | A | A | 20 | 8700 | 59 | 37 | 4 | 3 | 4 | 72 | 84 | 18 | 175 | NIL | NIL | NAD | 180 | |
| 29 | 90077 | Mrs. Seethalakshmi / F / 48 | Wheezing, chest tightness, Cough without expectoration | 08.11.2012 to 13.12.2012 | BT | P | W | P | P | 20 | 8200 | 63 | 33 | 4 | 6 | 8 | 69 | 77 | 23 | 170 | NIL | NIL | NAD | 160 | Good |
| | | | | | AT | A | A | A | A | 14 | 8000 | 59 | 37 | 2 | 4 | 6 | 71 | 84 | 21 | 180 | NIL | NIL | NAD | 350 | |
| 30 | 90359 | Mr. Sumsudeen / M / 40 | Cough without expectoration, sneezing, breathlessness, chest tightness | 09.11.2012 to 14.12.2012 | BT | P | W | P | P | 22 | 7900 | 60 | 34 | 7 | 20 | 35 | 68 | 81 | 25 | 175 | NIL | NIL | NAD | 180 | Good |
| | | | | | AT | A | A | A | A | 18 | 8200 | 59 | 39 | 2 | 8 | 15 | 70 | 82 | 20 | 180 | NIL | NIL | NAD | 300 | |
| 31 | 99462 | Mrs. Ranjitham / F / 42 | Cough, breathlessness, chest tightness, headache, sneezing | 12.12.2012 to 02.01.2013 | BT | P | W | P | P | 20 | 8100 | 50 | 35 | 6 | 10 | 12 | 70 | 81 | 25 | 171 | NIL | NIL | NAD | 110 | Good |
| | | | | | AT | A | A | A | A | 14 | 8400 | 61 | 37 | 4 | 4 | 8 | 72 | 84 | 20 | 180 | NIL | NIL | NAD | 340 | |

# *PIPER BETEL, Linn*

## *VERNACULAR NAMES:*

*English : betel leaf*

*Gujarati : paan*

*Hindi : pan*

*Kannada : panu*

*Malay : se keh*

*Tamil : vettrilai*

## *TAXONOMICAL CLASSIFICATION:*

*Kingdom : Plantae*

*Subkingdom : Tracheobionta*

*Superdivision : Spermatophyta*

*Division : Magnoliophyta*

*Class : Magnoliopsida*

*Subclass : Magnoliidae*

*Order : Piperales*

*Family : Piperaceae*

*Genus : Piper*

*Species : betel*

*A handbook to the flora of Natal / by J. Medley Wood*

*HABIT – The betel plant is an evergreen and perennial creeper, with glossy heart-shaped leaves and white catkin.*

*HABITAT – Mostly found in moist and hot climatic condition. In India, it is in found in Bihar, Bengal and South India.*

Parts used: leaves

Leaves - cordate, alternate , Aromatic, dark green with entire margin, acuminate apex and unequal base with stout petiole.
The leaves are stimulant, antiseptic and sialogogue. Essential oil from leaves— antispasmodic, antiseptic.

The Ayurvedics claim that the leaves are anthelminthic, aphrodisiac, carminative and laxative. They are also known to be stomachic and tonic.

The Yunani regard the leaves as a styptic and a vulnerary. They prescribe it to improve the appetite and taste, to strengthen teeth and as tonic for the brain, heart and liver.

CHEMICAL CONSTITUENTS:

Leaves contain protein 3.1 %, carbohydrate 6.9 %, minerals 2.3 %, and tannins 2 %. It contains calcium, phosphorus, iron, iodine and potassium is also present. Vitamin B, vitamin c and vitamin A. leaves contains bitter compounds that are about 0.7 to 2.6 %. It also contains an aromatic compound and stable oils like phenol and terpene. Besides this it contains eugenol, chavibetol and hydroxychavicol.,Allyl pyrocatecol,piper betol

**Effects of the active substance:**

The juice of betel leaves is credited with diuretic properties. Its juice mixed with diluted milk and sweetend, slightly help in easing urination.

The juice of a few betel leaves, with a teaspoon of honey will serve as a good tonic.The betel leaf has analgesic and cooling properties

A mixture of onion and betel leaves juice can cure fungal infection.
Eugenol in leaves prevent deadly fungus Candida albicans, anti-convulsive, analgesic, anesthetic, relieving spasms in smooth muscles.

Tannin Present in leaf is a astringent it is liver protective .

## LATERAL RESEARCH WORKS:

Radio protective activity Mammalian systems if exposed to radiation can cause damaging effects leading to cell death and an increased risk of degenerative diseases. Recently the radioprotective property of ethanolic extract of P.betle leaves was studied as alternative low cost preventive medicine to synthetic radioprotectants which are reported to be toxic. The capacity of the extract in preventing g-ray induced lipid peroxidation and DNA damage in rat liver mitochondria were assessed and evaluated to establish the mechanism of its radioprotective action. The study revealed significant immunomodulatory and superior radical scavenging activities which may be due to the presence of phenolic bioactives such as chavibetol and allyl pyrocatechol
Available online on www.ijprd.com

Protective and healing activity Most recently, a study was undertaken to evaluate the protective and healing effects of allylpyrocatechol against the indomethacin- induced stomach ulceration in rat model. Results showed that allylpyrocatechol can protect indomethacin-induced gastric ulceration due to its antioxidative and mucin protecting properties [53]



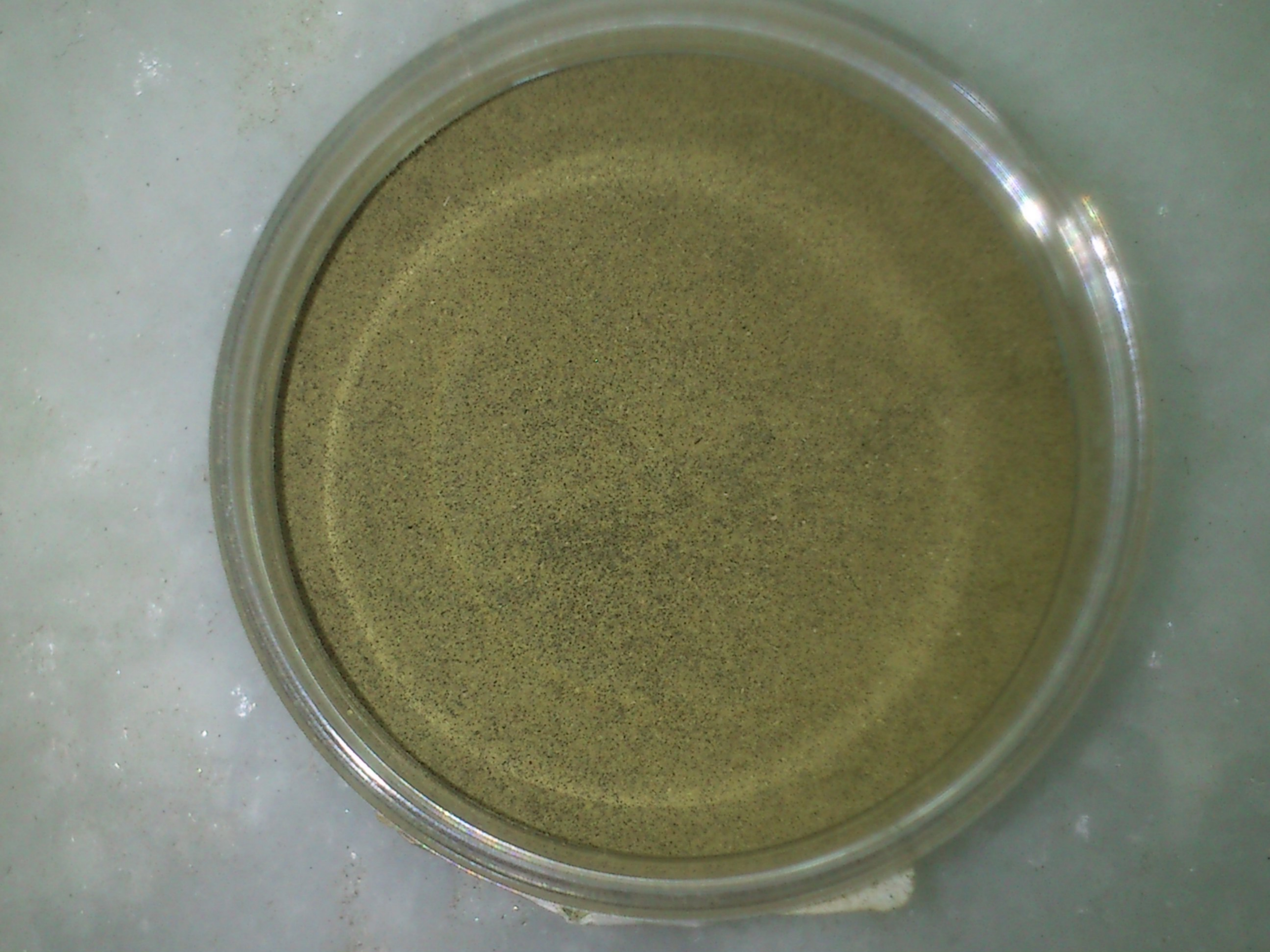
## Antibacterial activity:

The bioactive molecule thought to be responsible for antibacterial activity is sterol which has been obtained in large quantities in piper betel extract .The mode of action is surface interaction of sterol with the primary structure of cell wall membrane, ultimately leading to pore formation and degradation of bacterial component

**International Journal of Pharmacy and Pharmaceutical Sciences**
Vol 3, Suppl 3, 2011

*Anti inflammatory activity:*

Eugenol, one of the principal constituent of betel shows to possess anti inflammatory effects in various animal models of studies with various inflamogens (Dohi et al., 1989; Lee et al., 2007).



# VEDIUPPU CHENDHURAM

# Vitex Negundo Linn

# VEDIUPPU

**Before Purification**

**After Purification**

**Piper betle**

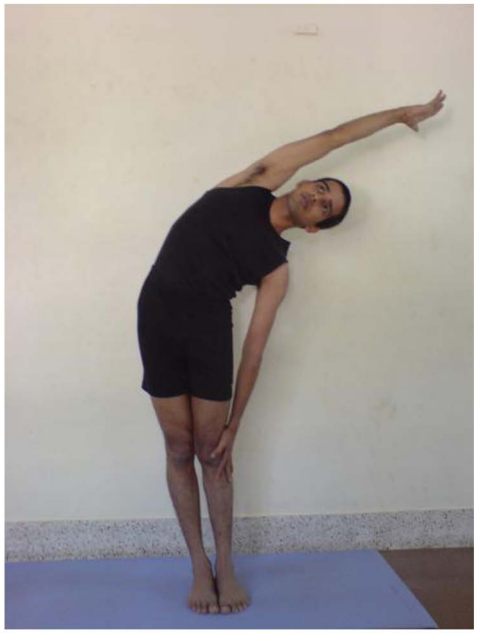
# SHADE DRIED TATTERD LEAVES OF VITEX NEGUNDO (VENNOCHI )

# VENNOCHI ILAI CHOORANAM

# USTRASANA

# BHUJANGASANA

# ARDHACHAKRASANA

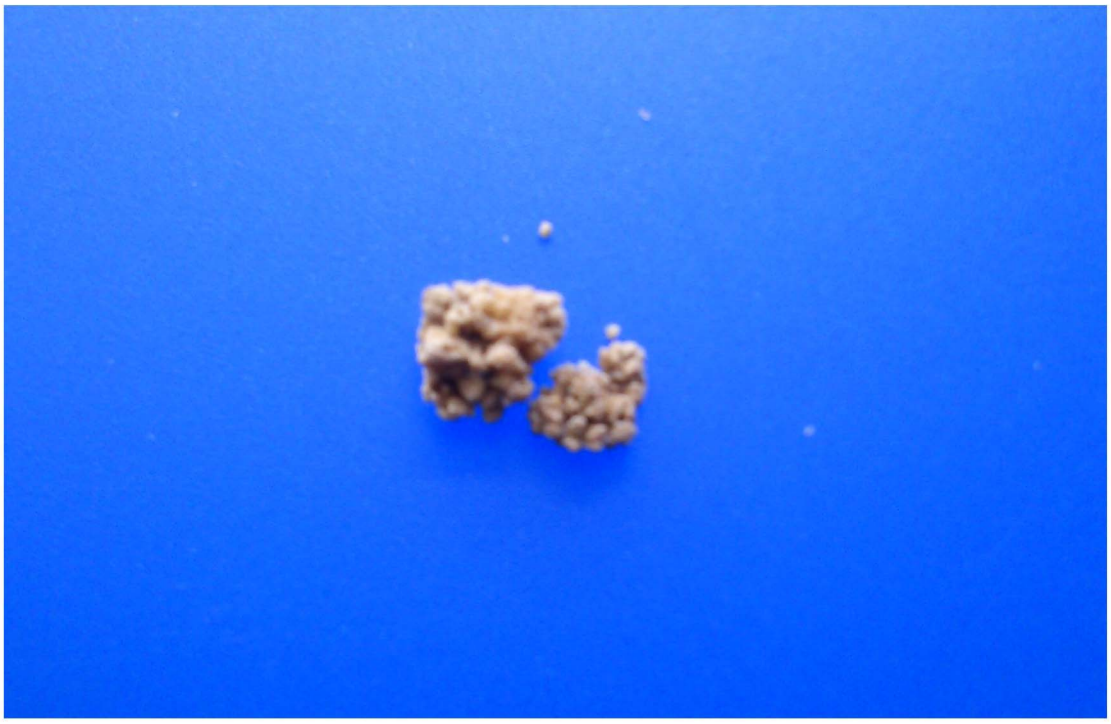


# CHAKRASANA

# MATSYASANA

# STONE SAMPLES

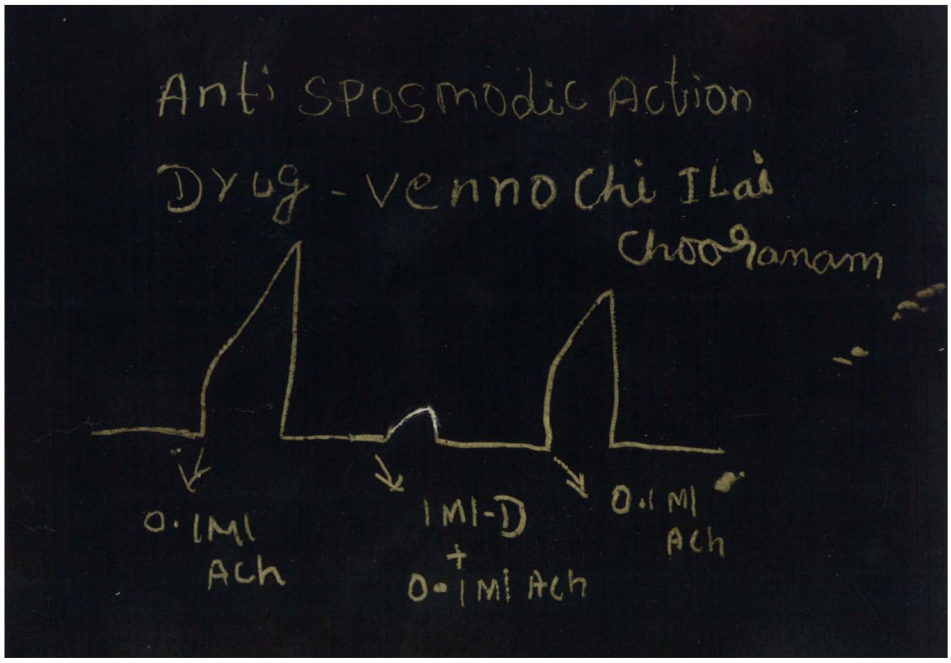
**PATIENT NAME: MR. PALPANDI AGE: 28 YRS**



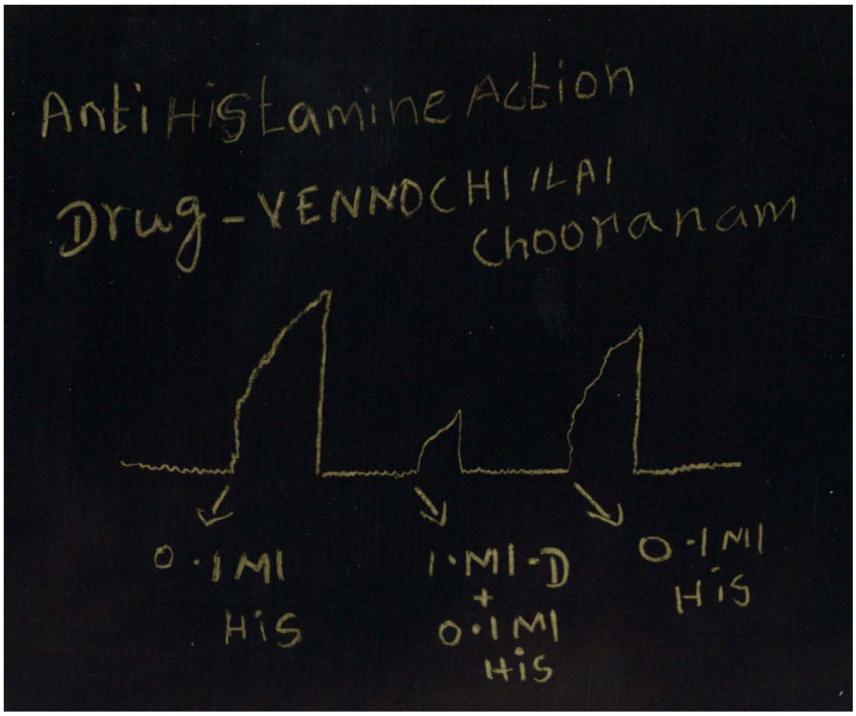
**PATIENT NAME: MR. BOOTHAPANDI AGE: 51 YRS**

# VENNOCHI ILAI CHOORANAM

## ANTI SPASMODIC ACTION
## GRAPHICAL REPRESENTATION

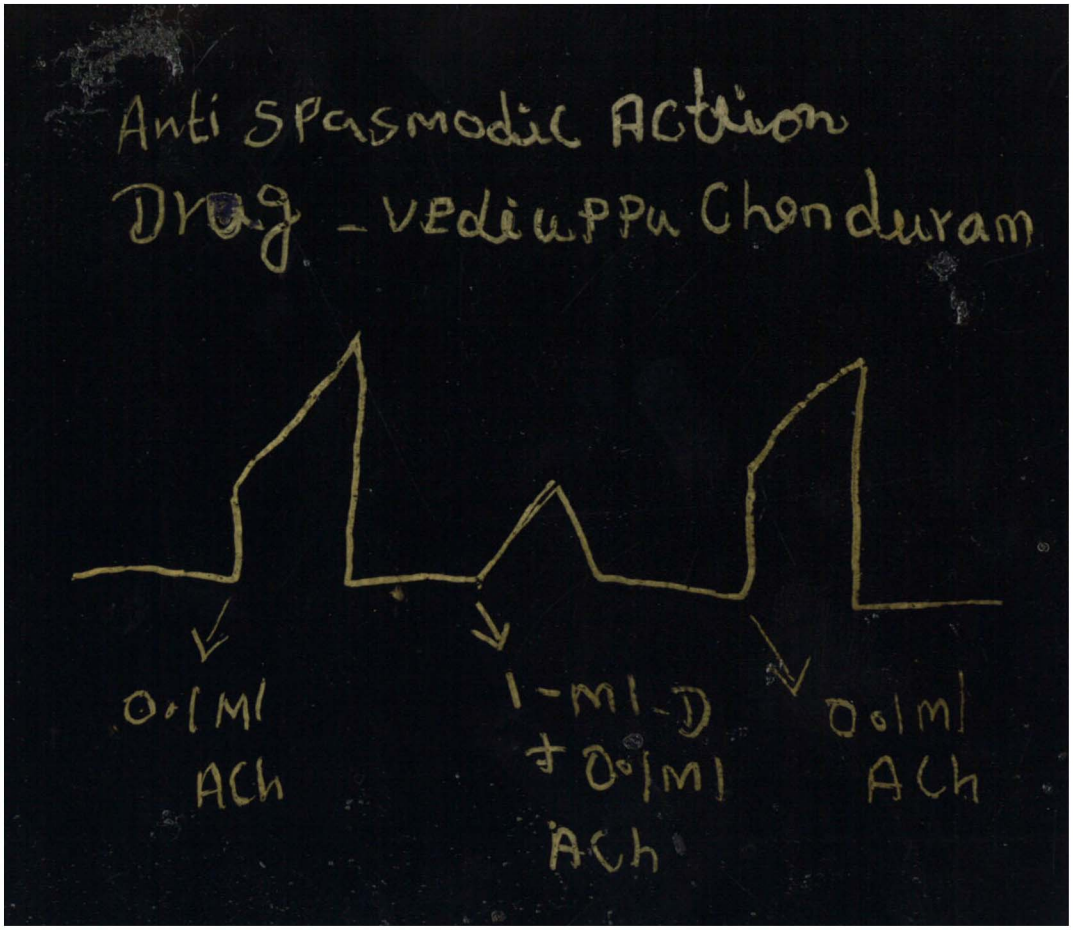



## ANTI HISTAMINIC ACTION
## GRAPHICAL REPRESENTATION

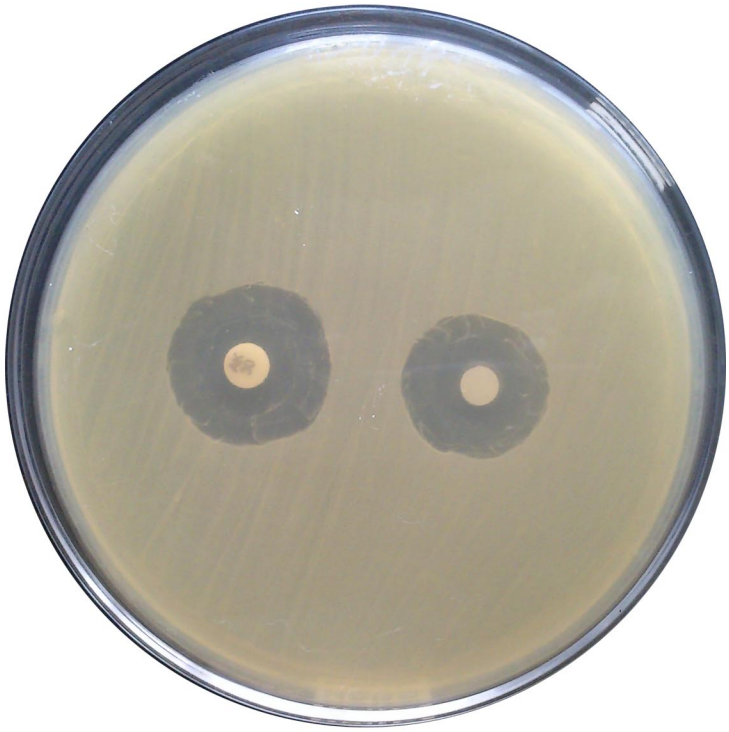


# VEDIUPPU CHENDHURAM

## ANTI SPASMODIC ACTION
## GRAPHICAL REPRESENTATION



## *Anti Microbial Activity*
## *Vediuppu Chendhuram*



*Klebsiella pneumoniae*

*Esherichia coli*

## *Anti Microbial Activity*
## *Vennochi Ilai Chooranam*

*Staphylococcus aureus*

*Streptococcus pneumoniae*

# CONTINUOUS MEDICAL EDUCATION PROGRAMME

## Conducted by

## POST GRADUATE DEPARTMENT OF GUNAPADAM
## GOVT. SIDDHA MEDICAL COLLEGE, PALAYAMKOTTAI

# Certificate

This is to certify that Dr. P. KEERTHANA

PG Gunapadam Department, Government Siddha Medical College, Palayamkottai has actively participated in the CME Programme held on 09.01.2013 at conference hall Govt. Siddha Medical College, Palayamkottai, Tirunelveli District.

This programme focussed on "INTERLINK BETWEEN THE PLANTS AND THE PLANETS, HERBAL REMEDY FOR TUBERCULOSIS & GENERAL GUIDELINES FOR RESEARCH AND EVALUATION OF TRADITIONAL MEDICINE".

| Dr.G.ESSAKKY PANDIAN | Dr.A. KINGSLY | Dr. N. CHANDRA MOHAN DOSS |
|---|---|---|
| Asst. Lecturer, Co-ordinator | Lecturer, HOD i/c | Principal |

# THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY

69, Anna Salai, Guindy, Chennai - 32.

## DEPARTMENT OF SIDDHA

# CERTIFICATE OF PARTICIPATION

This is to certify that Dr. .....P. KEERTHANA.....

has participated as ~~Resource Person~~ / Delegate in the Workshop on

**"Research Methodology & Biostatistics"** for AYUSH Post Graduates &

Researchers organized by the Dept. of Siddha from 04.01.2011. to 08.01.2011

| | | |
|---|---|---|
| Dr. N. Kabilan | Dr. Sudha Seshayyan | Dr. Mayil Vahanan Natarajan |
| Prof. & Head | Registrar i/c | Vice-Chancellor |

SHANMUGHA ARTS, SCIENCE, TECHNOLOGY & RESEARCH ACADEMY (SASTRA)

(A University established under Section 3 of the UGC Act, 1956)

**SASTRA University** Tirumalaisamudram, Thanjavur-613401.

*Centre for Advanced Research in Indian System of Medicine (CARISM)*

GOVT. APPROVED DRUG TESTING LABORATORY APPROVAL No. R.DIS.NO.:282/2010

## CERTIFICATE OF ANALYSIS

Name of the Product: 088-Vennochi ilai Chooranam  Report No : CAR/DTL/CUR057

Date of Sampling : 09.10.12  Report Date: 18.12.12

## PHYSICO-CHEMICAL STANDARDISATION

| S.No | TESTS | AS PER ANALYSIS |
|---|---|---|
| 1. | Description | Green coloured powder |
| 2. | pH(1% w/v solution) | 5.98 |
| 3. | Bulk density | 0.25gm/ml |
| 4. | Tap density | 0.50gm/ml |
| 5. | Loss on Drying at 105°C | 2.88% |
| 6. | Total Ash | 6.65% |
| 7. | Acid Insoluble Ash | 0.41% |
| 8. | Water Soluble Extractive | 25.21% |
| 9. | Alcohol Soluble Extractive | 21.84% |

## SIEVE ANALYSIS

| S.No | Sieve No (µ) | % of particles retained |
|---|---|---|
| 1. | 600 | 2.32 |
| 2. | 300 | 1.62 |
| 3. | 150 | 15.6 |
| 4. | 75 | 41.68 |
| 5. | Final Product | 38.0 |

ANALYST  LAB IN-CHARGE  ASSOCIATE DEAN & CO-ORDINATOR

SHANMUGHA ARTS, SCIENCE, TECHNOLOGY & RESEARCH ACADEMY (SASTRA)

(A University established under Section 3 of the UGC Act, 1956)

**SASTRA University** Tirumalaisamudram, Thanjavur-613401.

*Centre for Advanced Research in Indian System of Medicine (CARISM)*

GOVT. APPROVED DRUG TESTING LABORATORY APPROVAL No. R.DIS.NO.:282/2010

## CERTIFICATE OF ANALYSIS

Name of the Product: 087-Vediuppu
Date of Sampling : 09.10.12

Report No : CAR/DTL/CHE065
Report Date: 18.12.12

## PHYSICO-CHEMICAL STANDARDISATION

| S.No | TESTS | AS PER ANALYSIS |
|---|---|---|
| 1. | Description | Brown coloured powder |
| 2. | Loss on Drying at 105°C | 0.67% |
| 3. | Total Ash | 93.96% |
| 4. | Acid Insoluble Ash | 34.65% |

ANALYST

LAB IN-CHARGE

ASSOCIATE DEAN & CO-ORDINATOR

ॐ

# Swami Sivananda Centenary Charitatble Hospital

Phone : 04634 - 260207
E-mail : tvl sscch@sancharnet.in

PATTAMADAI - 627 453.
TIRUNELVELI DIST,, T.N.,

| PT.Name | Pothy Pandy | Age | 57/m | Date | 25/05/.. |
|---|---|---|---|---|---|
| Ref. By. | Dr. | | | | |

## ULTRA SONOGRAM ABDOMEN - *MALE*

**LIVER** Size : N

Echotexture : N

IHBR : N

Focal Lesion : N

**GALL BLADDER** N

**CBD** N

**PORTAL VEIN** N

**PANCREAS SIZE** N

Echotexture : N

**SPLEEN** N

| **KIDNEY** | | **RIGHT** | **LEFT** |
|---|---|---|---|
| Size | : | 10.2 x 4.3 cm | 9.9 x 3.7 cm |
| Cortico medullary | : | | N |
| Differentiation | : | N | |
| Calculus | : | Nil | |

**URINARY BLADDER** — N

**PROSTATE SIZE** — N

**IMPRESSION :**

— Left upper ureteric calculi (10mm, 7mm, 9mm) with grade 2 hydronephrosis

— Left renal mid calyx calculi (6mm)

— Left renal lower calyx calculi (8mm)

— Right renal lower calyx calculi (6mm)

# INSTITUTIONAL ANIMAL ETHICS COMMITTEE (I.A.E.C)
# GOVERNMENT SIDDHA MEDICAL COLLEGE
# PALAYAMKOTTAI

No...../IAEC/Government Siddha Medical College, Palayamkottai/2011-12 DT.....
Candidate Register No: 32101504

## CERTIFICATE

This is to certify that the dissertation topics, ***Bronchodilator – Anti-Spasmodic, Anti-Histaminic activity***and ***Acute toxicity study***of single drug **VENNOCHIILAI CHOORANAM**and***Lithnotriptic activity*** and ***Acute toxicity study***of compound drug **VEDIUPPU CHENDHURAM**have been approved by the IAEC on condition basis.

Name of chairman: - Pro.Dr.S.MOHAN.M.D(s)

Signature with date:

Name of member secretary: -Dr.S.KANIRAJA.M.D.(s)

Signature with date:

(Kindly make sure that minutes of the meeting duly signed by all the participants are maintained by office)

**GOVT. SIDDHA MEDICAL COLLEGE,**

**PALAYAMKOTTAI.**

**TIRUNELVELI – 627002.**

**SCREENING COMMITTEE.**

**Candidate Reg No: 32101504**

This is to certify that the dissertation topics ***Anti-Spasmodic, Anti-Histaminic activity*** of the single drug **VENNOCHI ILAI CHOORANAM** and ***Lithnotriptic activity*** ofthe compound drug**VEDIUPPU CHENDHURAM**have been approved by the screening committee.

| S.No | Name | Signature |
|---|---|---|
| 1. | Prof. Dr. N.CHANDRAMOHAN DOSS, M.D(s)<br>Principal& Chairman | |
| 2. | Prof. Dr. R. THANGAMONEY, M.D (s) | |
| 3. | Dr. A. SUBRAMANIAN, M.D (s) | |

(Kindly make sure that the minutes of the meeting duly signed by all the participation are maintained by the college office)

NABL
ISO : 15189 - 2007
Certification No. M-0068

Microbiological Laboratory™
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Ph : 0422 - 2540525, 2556628, 2550673 Fax : 0422 - 2541316
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www.microlabindia.com
MICROBES SINCE 1977

Bill No. 13119755

Name Mr/Ms : *PAL PANDI (OP)* Sex:M Age:28 Yrs

Ref. By Dr : KEERTHANA P BS MS/

Report Date : 03/12/201218:51

Sample Date : 01/12/201215:32



## Final Test Report

NABL Accredited Laboratory

| Spec.Type | Test Name | Results | Units | Normal Ranges | Approved by | Processing Date | Time |
|---|---|---|---|---|---|---|---|
| **BIOCHEMISTRY** | | | | | | | |
| **Stone Analysis** | | | | | | | |
| URINE | *STONE Calcium* | 74 | % | | Devaki | 02/12/2012 | 16:51 |
| URINE | *STONE Cysteine* | 00 | % | | Devaki | 02/12/2012 | 16:51 |
| URINE | *STONE Magnesium* | 00 | % | | Devaki | 02/12/2012 | 16:51 |
| URINE | *STONE Oxalate* | 26 | % | | Devaki | 02/12/2012 | 16:51 |
| URINE | *STONE Phosphate* | 00 | % | | Devaki | 02/12/2012 | 16:51 |
| URINE | *STONE Uric Acid* | 00 | % | | Devaki | 02/12/2012 | 16:51 |

Results related only to the item tested * Not accredited by NABL

**End of the Report**

Sample Collected and Sent

32 yrs

Department of Clinical Pathology | Department of Bio-Chemistry | Department of Microbiology

Dr. V. S. Nagabhushan Ph.D., HOD - Biochemistry

Dr. Krishna Venkateswaran M.D., D.N.B., Pathologist

M. Mani M.Sc., Chief of Laboratory Service



CAP Survey Participant

NABL
ISO : 15189 - 2007
Certification No. M-0068


# Microbiological Laboratory

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MICROBES SINCE 1977


**Bill No.** 13119756

Name Mr/Ms : ***BOOTHA PANDI (OP)*** Sex:M Age:51 Yrs

Ref. By Dr : KEERTHANA P BS MS/

Report Date : 03/12/201218:51

Sample Date : 01/12/201215:35

## Final Test Report



NABL Accredited Laboratory

| Spec.Type | Test Name | Results | Units | Normal Ranges | Approved by | Processing Date Time | |
|---|---|---|---|---|---|---|---|
| **BIOCHEMISTRY** | | | | | | | |
| **Stone Analysis** | | | | | | | |
| URINE | ***STONE Calcium*** | **60** | % | | Devaki | 02/12/2012 | 16:51 |
| URINE | ***STONE Cysteine*** | **00** | % | | Devaki | 02/12/2012 | 16:51 |
| URINE | ***STONE Magnesium*** | **00** | % | | Devaki | 02/12/2012 | 16:51 |
| URINE | ***STONE Oxalate*** | **21** | % | | Devaki | 02/12/2012 | 16:51 |
| URINE | ***STONE Phosphate*** | **00** | % | | Devaki | 02/12/2012 | 16:51 |
| URINE | ***STONE Uric Acid*** | **19** | % | | Devaki | 02/12/2012 | 16:51 |

Results related only to the item tested * Not accredited by NABL **End of the Report** Sample Collected and Sent

32 yrs

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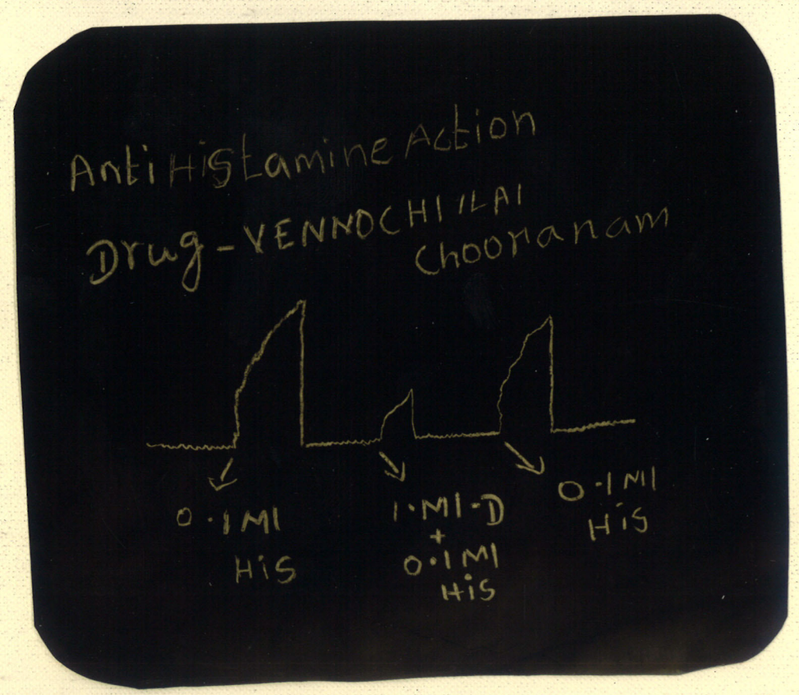
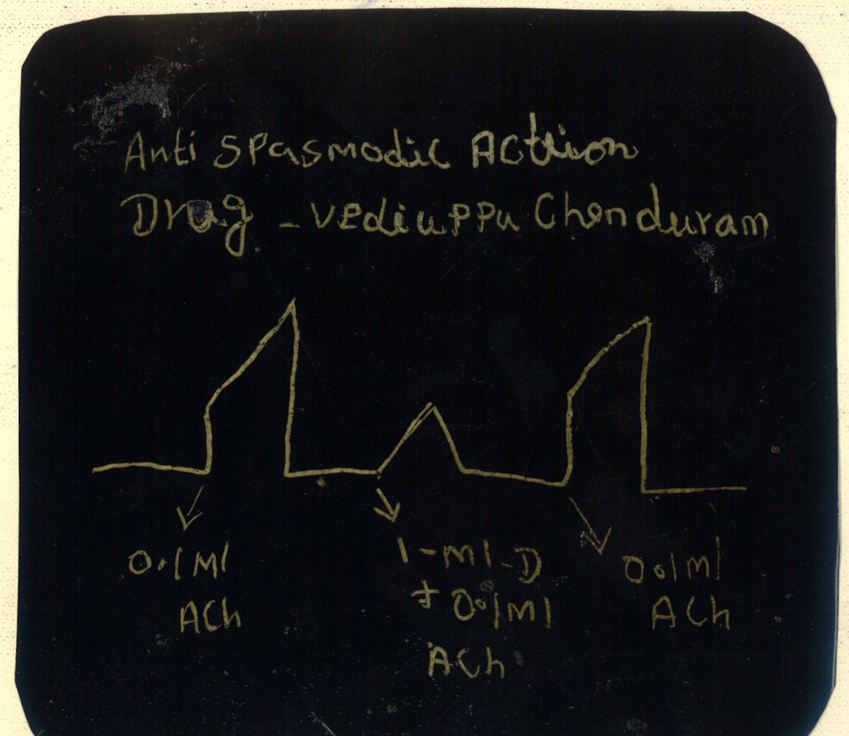
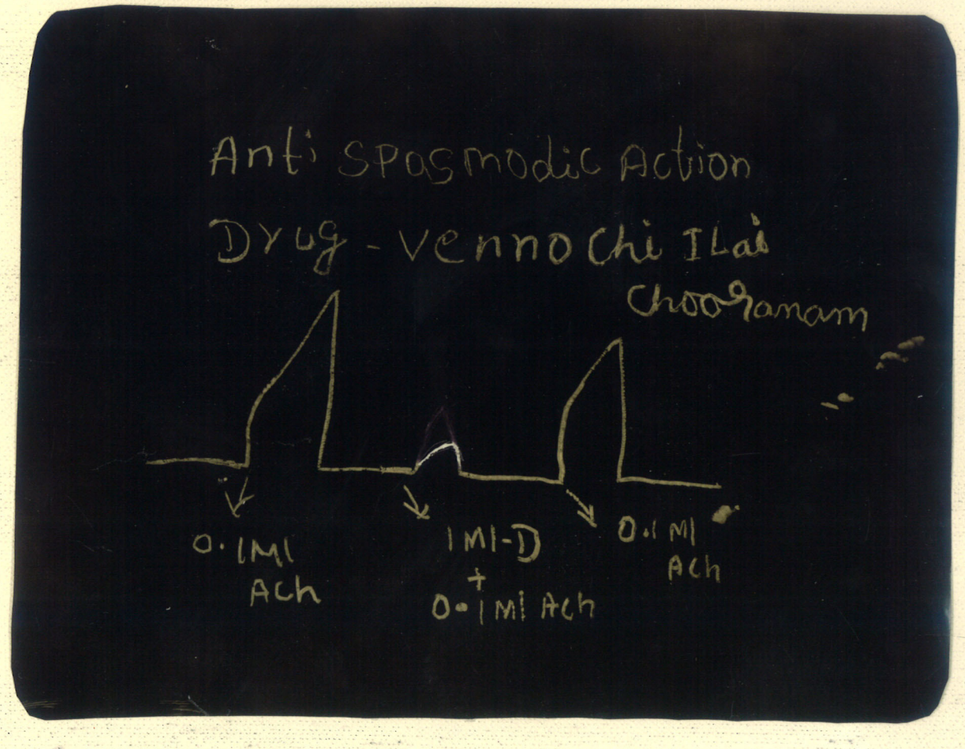

Anti Histamine Action
Drug - VENNOCHILAI
Chooranam
0·1 Ml
His
1·Ml-D
+
0·1 Ml
His
0·1 Ml
His


Anti Spasmodic Action
Drug - Vediuppu Chenduram
0·1 Ml
ACh
1-Ml-D
+ 0·1 Ml
ACh
0·1 Ml
ACh


Anti Spasmodic Action
Drug - Vennochi ILai
Chooranam
0·1 Ml
Ach
1 Ml-D
+
0·1 Ml Ach
0·1 Ml
Ach